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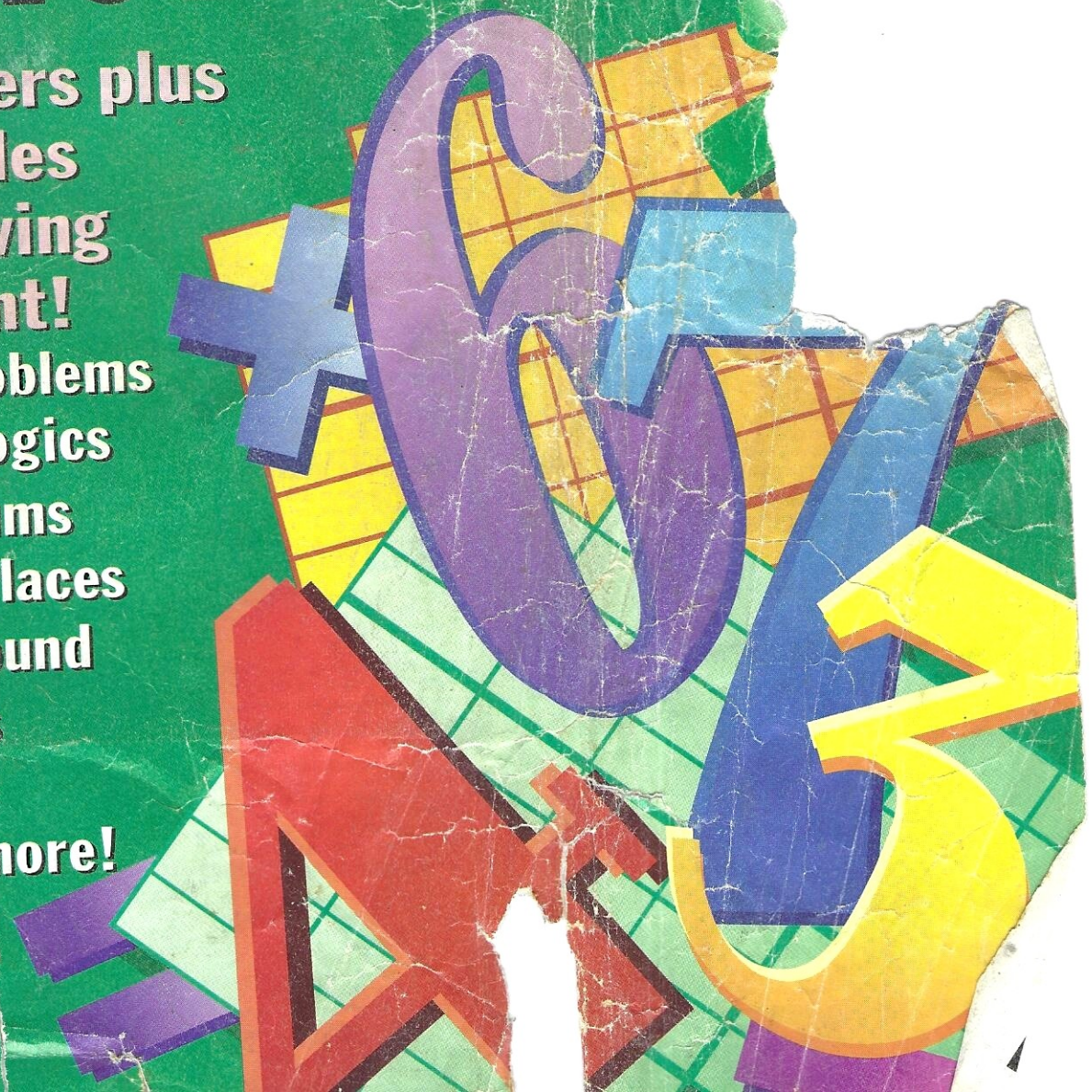

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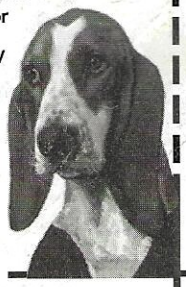

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Cover illustration by O'Neil Nanco

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LETTER FROM THE EDITORS

There are many questions we all ask ourselves daily. "What should I wear today?" is a common enough one, as is "Do I need a sweater before going outside?" "What will I have for lunch?" is heard a lot around the Dell offices. That, of course, is often followed up later in the day by "I ate so much for lunch, but could I still have pizza for dinner?" Uncertainties abound also: "Will I be on time for the train or bus?" and "What will the dentist tell me?" Naturally, there are topics beyond our immediate lives that merit notice, such as the economy, foreign policy, and even uncertain election outcomes. Then there are things we can always rely on: the never-closed 24-hour store down the street, the always-free public library, and income taxes (hey, not everything reliable is desirable!). In the stormy sea of unpredictability, there are indeed constant points of light in which we can take comfort. Truly, *Dell Math Puzzles and Logic Problems* is one such beacon. You can depend not only on its appearing regularly on the newsstand, but more importantly, on the trustworthiness of the puzzles inside. And if it's what's inside that counts, then what's inside this issue counts for a lot!

You can bet the 15 Logic Problems offer satisfaction for the logically inclined. They range from easy, starting with "The Art Fair," to challenger, "The Wooley Quilt." Each offers fun for a matter of minutes or, for serious solving, a lot longer than that. Same with the ten Figure Logics. The first three are of a more traditional nature, but as you progress, you'll find that some have twists and quirks and are a bit trickier. Cross Sums and Word Arithmetics present dependable solving pleasure for novice and veteran alike, too. And, of course, there are the myriad other features for rock-solid entertainment, including Number Place (and Number Place Challenger), Five by Five, Out and Around, Math Maze, Three-Layer Magic, and Cross Numbers.

You might be unsure as to what clothing to put on in the morning or whether to have a hamburger or salad, and there could be a day when you don't catch your transportation on time to wherever you're going. However, one question you won't have to ask is "Where can I find some terrific solving?" There is no doubt that *Dell Math Puzzles and Logic Problems* assures you a darn good time if number and deductive posers are what pique your curiosity. You can bank on it!

One other certainty is that we'd love to hear about your likes and dislikes regarding this issue in particular. We can be reached in all kinds of ways. Please direct your correspondence to:

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the Editors

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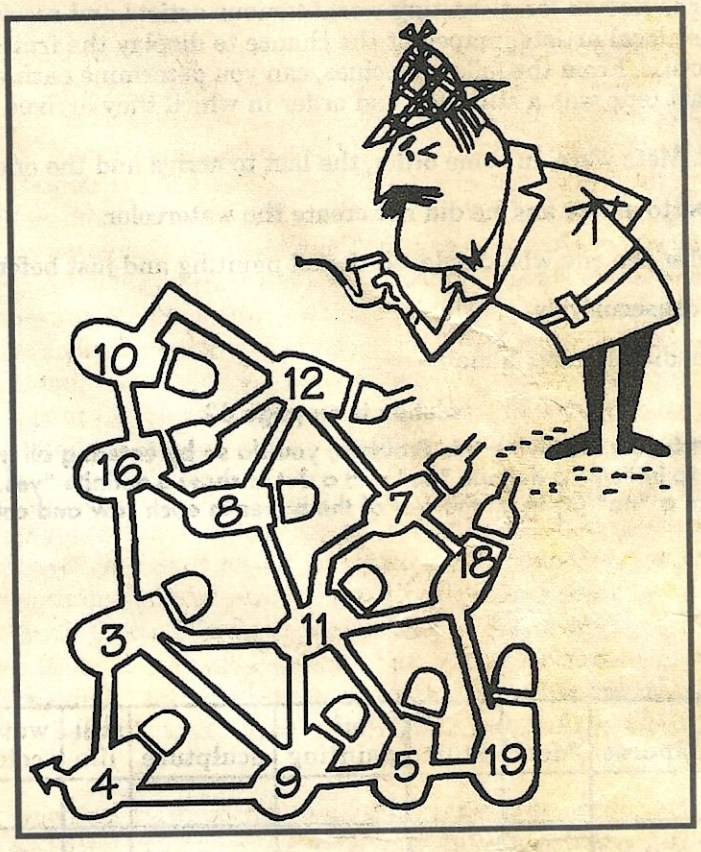
MYSTERIOUS FOOTPRINTS

Help the detective by trailing the mysterious "59" bandit from the detective to the exit arrow in such a way that the numbers in the footprints you "walk in" add up to exactly 59.

Answer is on page 65.



LETNUMS

To solve this puzzle you must fit the words from the list below into their proper places in the diagram. Each letter has a numerical value, as shown below. To help you, we've also listed the numerical value for each word. In solving Letnums, you must remember that the total of the letters in each line, reading across and down, must equal the total shown for that line in the diagram.

Solution is on page 60.

A = 1	N = 14
B = 2	O = 15
C = 3	P = 16
D = 4	Q = 17
E = 5	R = 18
F = 6	S = 19
G = 7	T = 20
H = 8	U = 21
I = 9	V = 22
J = 10	W = 23
K = 11	X = 24
L = 12	Y = 25
M = 13	Z = 26

3 Letters

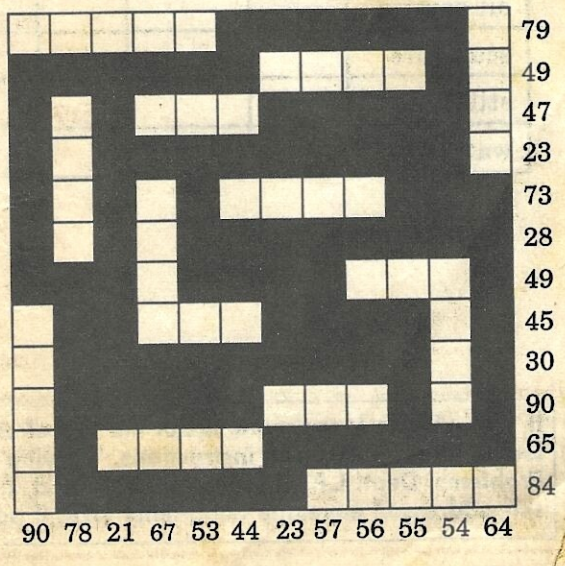
Cut	44
Dig	20
Hoe	28
Sow	57

4 Letters

Clip	40
Pick	39
Plow	66
Rake	35
Thin	51
Till	53
Weed	37

5 Letters

Plant	63
Prune	74
Spray	79



LOGIC PROBLEM 1

THE ART FAIR

by Diane C. Baldwin

The Mt. Clemens art fair is known for attracting world-famous artists and receiving much media attention. Jason, Lisa, and two other local artists jumped at the chance to display the fruits of their labor and perhaps catch the eye of a noted critic. From the following clues, can you determine each entrant's full name (one last name is Brigg), work of art (one was a still life), and order in which they arrived at the fair?

1. Ms. Lindros and Ms. Metz were, in some order, the last to arrive and the one who made the sculpture.
2. Tom was not the first to arrive and he did not create the watercolor.
3. Stein arrived just after the one who displayed the oil painting and just before Penelope.
4. The women arrived consecutively.
5. Lindros arrived immediately after a man.

Solution is on page 62.

If you care to use the chart below in solving this Problem, you do so by entering all information obtained from the clues using, perhaps, an X to indicate a definite "no" and a dot to show a definite "yes." Remember: Once you enter a definite "yes" (dot), place a "no" (X) in all the rest of the boxes in each row and column that contains the dot.

	Brigg	Lindros	Metz	Stein	oil painting	sculpture	still life	water-color	1st	2nd	3rd	4th
Jason												
Lisa												
Penelope												
Tom												
1st												
2nd												
3rd												
4th												
oil painting												
sculpture												
still life												
watercolor												

If you wish to learn more about the use of Logic Problem charts and how they can assist you, send for a free leaflet of easy-to-follow instructions, "Solving Logic Problems, Step by Step." Mail to Dell Math Puzzles and Logic Problems, Dept. L.P., Dell Magazines Direct, 6 Prowitt St., Norwalk, CT 06855-1220. Please enclose a stamped, self-addressed envelope (long-letter size, if possible, please).

BINGO PLAYS 1

Each square on the Bingo playing card below contains 15 numbers (with the exception of the "FREE" space, which has no number in it). Follow the clues below to eliminate numbers until you are left with only one number in each square. No number will be repeated in any column. Then find your winning Bingo combination—just as in Bingo, the numbers in only one row, column, or diagonal will fit the clues given. Note: It is helpful to go back and read the clues a second time, remembering to eliminate those numbers which do not appear in the winning combination.

Solution is on page 60.

1. The number one does not appear on the card as a single-digit number, nor does it appear in row A, square PO, LB, LI, LN, YB, YO, SB, SI, or SO, or in the winning combination.
2. The number two does not appear in column O or square PB.
3. The number three does not appear in column G or square LB, LI, AB, or YB.
4. The number four does not appear in row Y, column B, I, or O, or square PN.
5. The number five does not appear in column N, square PB, PO, LB, LG, AB, YI, or YO, or in the winning combination.
6. The number six does not appear on the card as a single-digit number, nor does it appear in row P, column N or G, or square AI or YI.
7. The number seven does not appear on the card as a single-digit number, nor does it appear in row A, column I, or square PG, LO, or YN.
8. The number eight does not appear on the card as a single-digit number, nor does it appear in column I, N, or O or square PG, LG, AG, or SG.
9. The number nine does not appear in column I, N, G, or O or square AB.
10. Zero does not appear in row S, column G, or square PI, PO, LN, YI, or YO.
11. The number 22 is the only same-digit double-number combination on the card.
12. The number 65 is the only consecutive-digit combination (in either order) on the card.

	B	I	N	G	O
P	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
L	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
A	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	FREE	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
Y	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
S	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

CROSS NUMBERS

The idea of Cross Numbers is to arrive at the figures given at the bottom and right-hand columns of the diagrams by following the arithmetic signs in the order they are given (that is, from left to right and top to bottom). Use only the numbers below each diagram to complete its blank squares. **Solutions are on page 60.**

1.

	+		+		23
−	■	÷	■	+	■
	+		X		25
X	■	X	■	−	■
	+		X		11
28	■	12	■	12	■

1 2 3 4 5 6 7 8 9

2.

	−		X		18
÷	■	+	■	÷	■
	+		X		21
X	■	+	■	X	■
	+		+		20
32	■	15	■	15	■

1 2 3 4 5 6 7 8 9

3.

	÷		+		13
X	■	+	■	−	■
	−		X		14
÷	■	+	■	X	■
	+		X		45
10	■	7	■	9	■

1 2 3 4 5 6 7 8 9

FUN WITH FACTS AND FIGURES

This little quiz tests you on a lot of little things. Solve the quiz in the order given since each answer is used in the next statement. There are no fractions used here. **Answer is on page 65.**

1. Take the number of players a baseball team puts on the field.
2. Multiply that by the number of months that have no "r's."
3. Multiply that by the number of planets that are closer to the sun than the earth.
4. Subtract from that the number of pints in a gallon.
5. Multiply that by the number of letters in Germany's capital.
6. Divide that by the sum of the digits of the year Columbus discovered the New World.
7. Add to that the number of digits in a Social Security number.
8. Subtract from that the number of states with directional names.
9. Multiply that by the number of Presidents whose last names start with "E."
10. Our answer is the number of the day that Memorial Day falls on in 2001.

FIGURE LOGIC 1

by Linda Thistle

Solve Figure Logic by completing some simple arithmetic problems, which will enable you to move from clue to clue through the puzzle. You will not always be able to complete an entire number at first, but you may be able, by logic, to determine what one or more of the digits must be. If you enter those digits into the diagram, they may help you to solve other clues, and you can eventually return to the unfinished numbers and finally complete them.

NOTE: A square of a number is that number multiplied by itself. For example, the square of 5 is 25 (5 x 5 = 25). A cube is a number multiplied by its square (27 is the cube of 3, because 3 x 3 x 3 = 27). A palindrome is a number that reads the same forwards and backwards. A square root is a number whose square is the given number (5 is the square root of 25). A factor is a number that divides evenly into another number (4 is a factor of 12). A multiple is a number that is the product of a specific number and another number (10 is a multiple of 5, since 5 x 2 = 10).

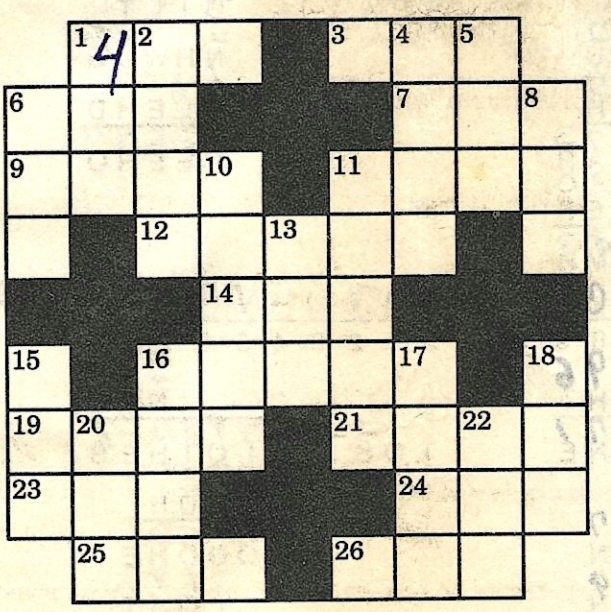
If you need help starting this puzzle, a starting help is given on page 65.

ACROSS

1. Sixty more than 1-Down
3. One more than 24-Across
6. One-third of 15-Down
7. Six hundred more than 6-Across
9. 1-Across plus 21-Across
11. Seventy less than 16-Down
12. Consecutive digits rearranged
14. Forty less than 20-Down
16. Three hundred less than 11-Down
19. Four more than 4-Down
21. Nine times 25-Across
23. Consecutive odd digits in ascending order
24. Eighty less than 26-Across
25. Forty less than 23-Across
26. Seven more than 6-Across

DOWN

1. Digits of 3-Across rearranged
2. Six thousand more than 11-Across
4. Forty more than 17-Down
5. Two hundred less than 18-Down
6. 14-Across minus 23-Across
8. One less than 13-Down
10. Four times 16-Across
11. One-third of 12-Across
13. Ten less than 22-Down
15. Consecutive digits rearranged
16. Three times 8-Down
17. 9-Across minus 18-Down
18. Two times 6-Down
20. Sixty more than 7-Across
22. Three more than 25-Across



Solution is on page 60

Crazy about Figure Logic? See page 15 to order the ***Collector's Series Edition!***

WORD ARITHMETIC

These are long-division problems in which letters are substituted for numbers. Solve the problem; determine the number value of each letter; and, when the letters in each one have been arranged in order from 0 to 9, they will spell out a word or words.

Answers are on page 65.

1. FOL A C SO

0 1 2 3 4 5 6 7 8 9

```
          2
          LED
24   | 8218
LAKE | CLOCKS
       40
       AFCN
       21 1
       LODOK
       20 0
       LFKFD
       11088
       OOFSS
       10142
       OFOAL
          86
          SDC
```

2. S

0 1 2 3 4 5 6 7 8 9

```
            FOG
            0
HOG | DRIFTS
      DWRF
      0
      ORST
      WIFD
          0
      IFFS
      FGHT
      GIW
```

3. CONFIGURED

0 1 2 3 4 5 6 7 8 9

```
          3167
          FOUR
3178 | 10067789
FORE | OCCURRED
       9534
       DGFI
       58337
       GFFR
       3178
       FORE
       21598
       NOGDE
       19068
       ODCUE
       25309
       NGFCD
       22946
       NNNIU
       30633
       FCUE
```

4. FOURTHGAME

0 1 2 3 4 5 6 7 8 9

```
            4512
            THOU
1745 | 8874923
OATH | AMATEUR
       6980
       GEMF
       8849
       METE
       8725
       MAUH
       22422
       UUTU
       1745
       OATH
       49273
       TEAR
       3490
       RTEF
       14833
       OTMR
```

5. WINTHEGOLD

0 1 2 3 4 5 6 7 8 9

```
            413
            HIT
5183 | 2559125
GILT | NEEDING
       24732
       NHOTN
       85922
       LEDN
       61783
       GILT
       24098
       NHWDG
       19549
       ILEHD
       55447
       EEHO
```

6. AREYOUKIND

0 1 2 3 4 5 6 7 8 9

```
            152
            RUE
6228 | 9486233
KEEN | DONKEY
       6228
       KEEN
       32582
       YEUNE
       31140
       YRROA
       14423
       ROOEY
       12456
       REOUK
       19677
       RDKI
```

7. ZEBRAFINCH

0 1 2 3 4 5 6 7 8 9

```
            896
            CHI
2421 | 21701771
BABE | BENZENE
       19368
       EHRIC
       23337
       BRRRN
       21789
       BENCH
       15451
       EFACE
       14526
       EAFBI
       8555
       HFF
```

8. HOTCANDLES

0 1 2 3 4 5 6 7 8 9

```
            516
            NOD
7188 | 3715080
LOST | CLOTHES
       35960
       CNSDH
       11608
       OODHE
       71942
       LOST
       44169
       AAODS
       43158
       ACONT
       10177
       OHOL
```

9.

0 1 2 3 4 5 6 7 8 9

```
          PIE
DOE | MIDDLE
      MSPO
      IMEL
      DOE
      DIYE
      DIII
        LN
```

LOGIC PROBLEM 2

ONE SUNDAY MORNING

by W. R. Pinkston

Ed and three other people live in the same apartment building. Each Sunday morning they usually run into each other in the lobby while they're on their way to buy a newspaper. This happened on a recent Sunday, and in addition to buying a newspaper, each also needed another item. From the following clues, can you determine each apartment dweller's full name (one last name is Conti), destination (one person went to a diner), newspaper, and additional item?

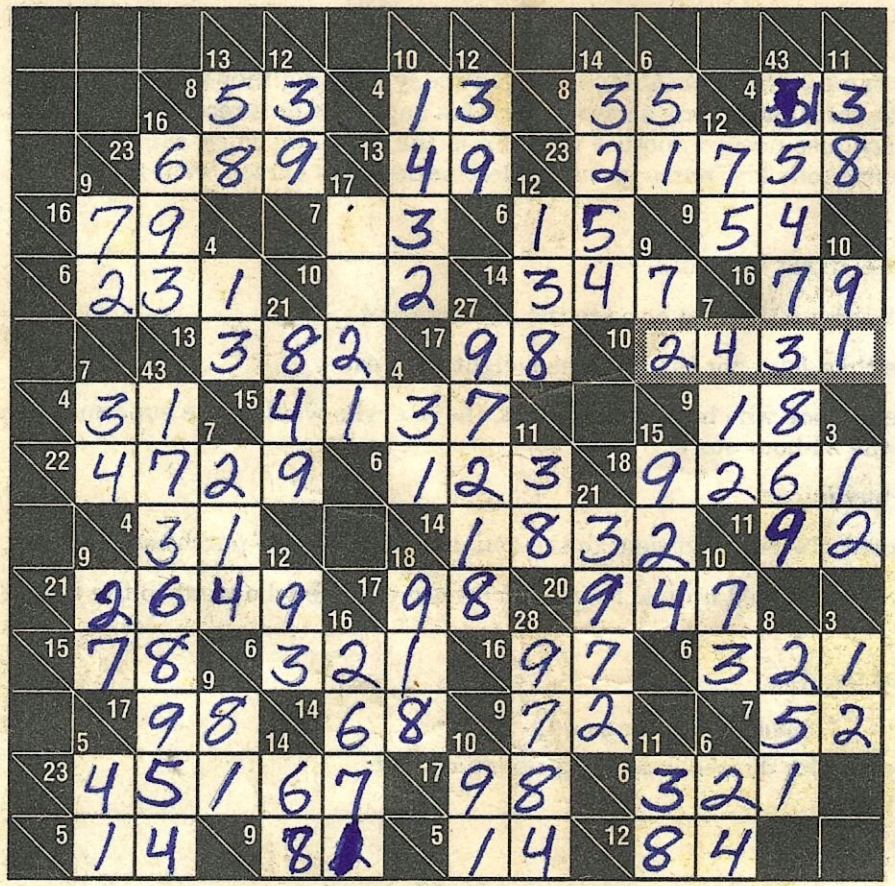
1. The one who bought the Free Press didn't buy milk.
2. The one who bought coffee didn't pick up the Post or go to the supermarket.
3. The one who bought milk was neither John nor the one who bought the Post.
4. The four apartment dwellers are the one who bought the Times, the one who went to the supermarket, Beard, and the one who went to the 24-hour store.
5. Hicks, who is not Felicity, didn't buy juice.
6. The four residents are Sylvia, Apted, the one who went to the deli, and the one who purchased milk.
7. The one who picked up the News also picked up tea. Neither John nor the one who went to the supermarket store bought the News.
8. The Free Press was not bought at the deli.

Solution is on page 62.

Turn to page 6 for directions on using standard charts.

	Apted	Beard	Conti	Hicks	deli	diner	super-market	24-hour store	Free Press	News	Post	Times	coffee	juice	milk	tea
Ed																
Felicity																
John																
Sylvia																
coffee																
juice																
milk																
tea																
Free Press																
News																
Post																
Times																
deli																
diner																
super-market																
24-hour store																

CROSS SUMS



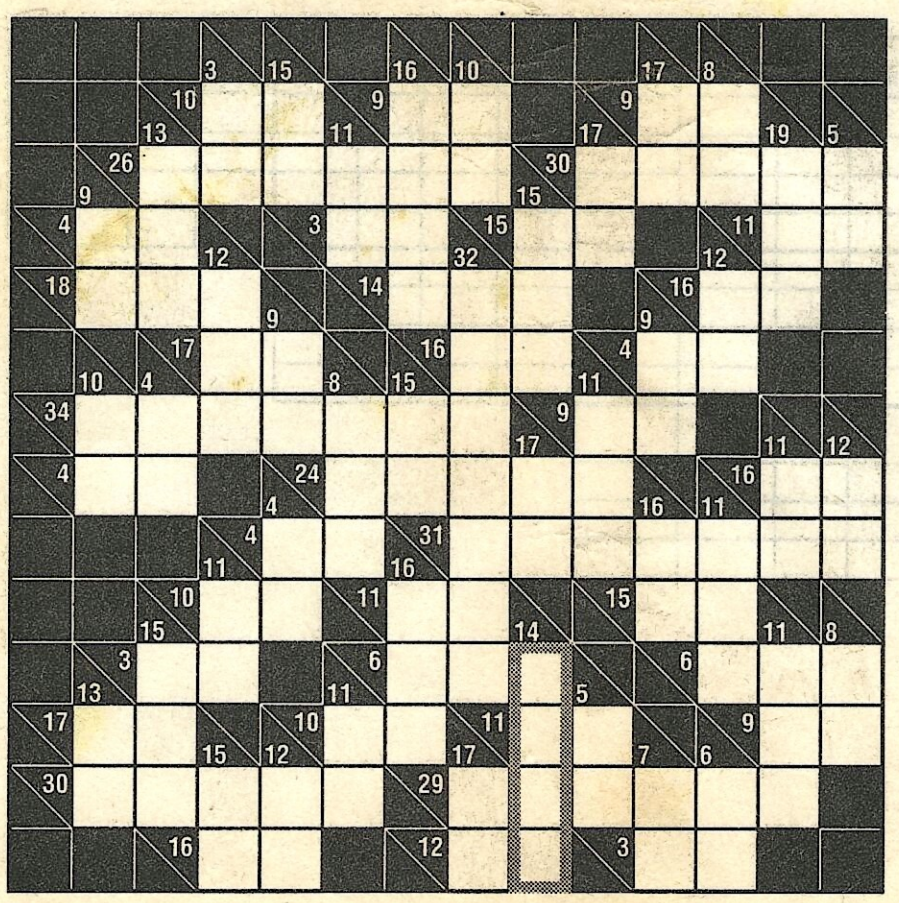
1.

The numbers in the black squares in these puzzles refer to the sums of the digits to be filled into the empty spaces. The number below a diagonal line is the sum of the numbers below it. The number above a diagonal line is the sum of the numbers to the right of it. Place one digit (1 to 9, no zeros) in each square.

IMPORTANT: No digit is used more than once in any particular digit combination. We have outlined one area in each diagram on these two pages. If you need help starting a puzzle, the digit combination for that area is listed on page 65.

Solutions are on page 59.

Eelbow?



2.

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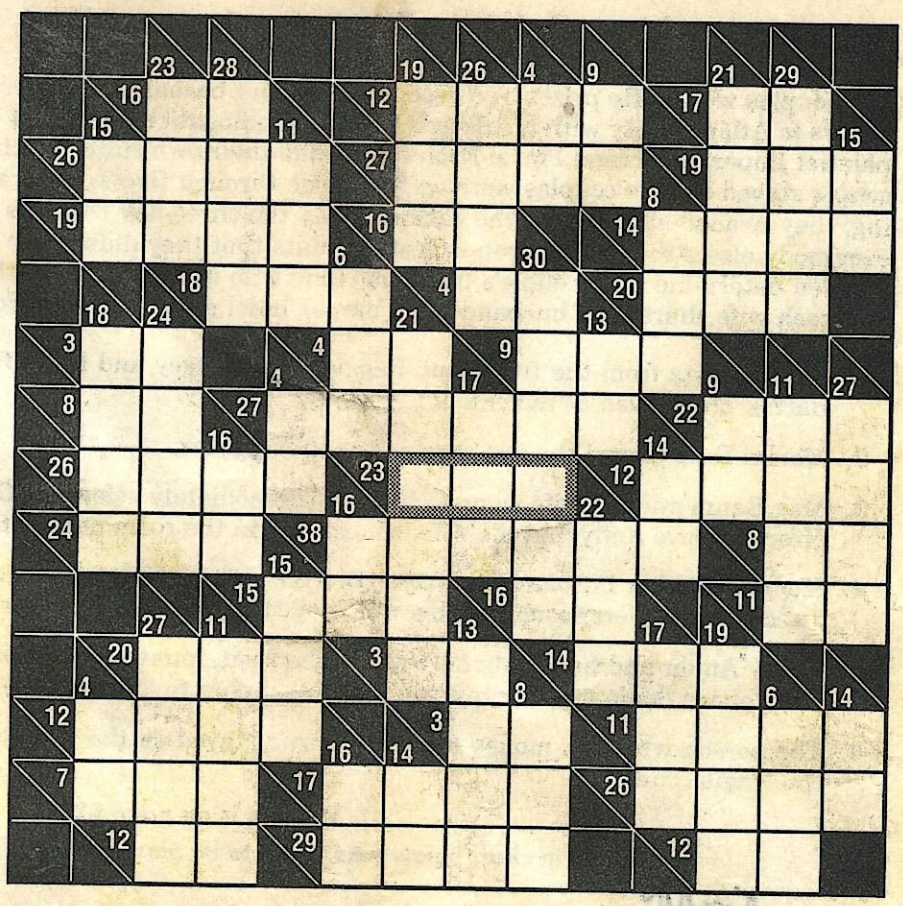
CROSS SUMS

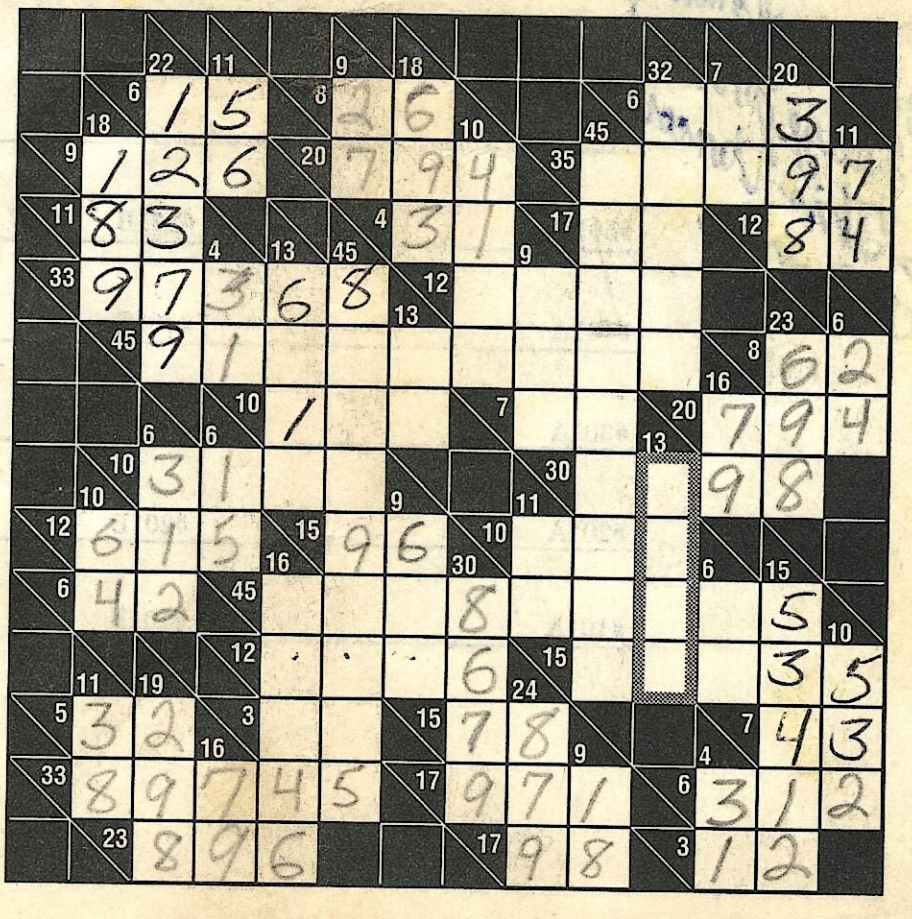
3.

Solutions are on page 59.



The Conked Rockies?

4.



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Crosscodes	CRO	1
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Cryptic Crosswords	CRX	1
Cryptograms	DCG	2 3
Cryptoquizzes	CPQ	1 2 3
Figgerits	FIG	1 2 3 5 6 7 8
Figure Logic	FGL	1
Kriss Kross	KRK	1 2
Laddergrams	LDG	1
Number Place	NBP	1
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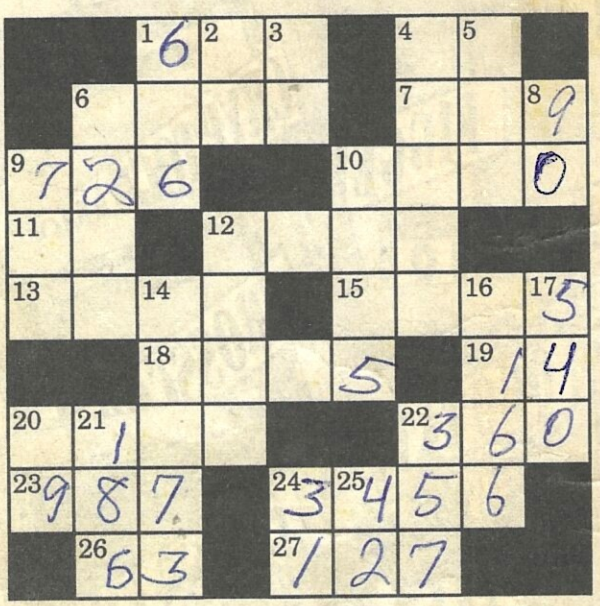
FIGURE LOGICS 2 & 3

by Linda Thistle

Directions for solving Figure Logics are on page 9.
If you need help starting these puzzles, starting helps are given on page 65.

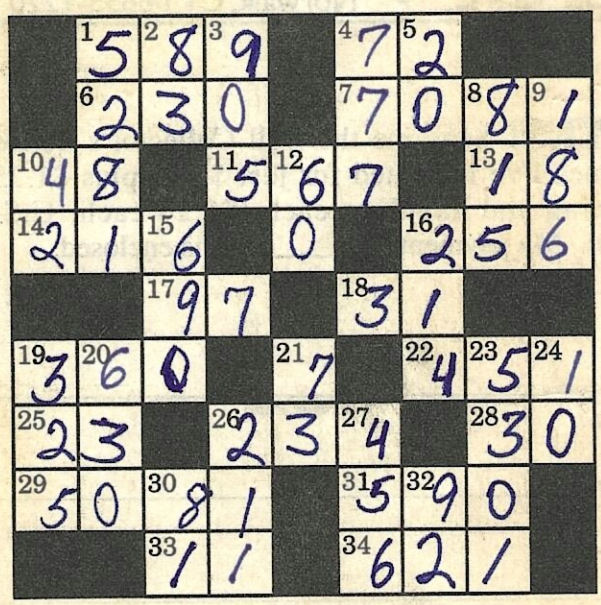


ACROSS

1. Its first digit is the sum of its other digits
4. Sum of the digits of 6-Across
6. Consecutive digits in ascending order
7. Each digit is a different multiple of three
9. 17-Down plus 21-Down
10. Its first digit is the sum of its other digits
11. One digit is twice the other
12. Its last digit is the sum of its other digits
13. Four times 12-Across
15. Three times 18-Across
18. Its last digit is the sum of its other digits
19. One-third of 25-Down
20. Product of the digits of 4-Down
22. Product of the digits of 24-Across
23. Consecutive digits in descending order
24. Consecutive digits in ascending order
26. One digit is twice the other
27. The sum of its digits is the same as the sum of the digits of 18-Across

DOWN

1. 27-Across plus 9-Down
2. Consecutive digits in ascending order
3. 2-Down minus 20-Down
4. Assorted even digits
5. Consecutive digits in ascending order
6. The product of its first two digits equals the sum of its last two digits
8. One-fourth of 22-Across
9. Its last digit is the sum of its other digits
10. The product of its digits is 17-Down
12. Same digit repeated
14. Assorted odd digits
16. 19-Across plus 20-Across
17. Six times 8-Down
20. Sum of the digits of 14-Down
21. Six times 24-Down
22. Consecutive odd digits in ascending order
24. One digit is three times the other
25. One digit is twice the other



ACROSS

1. One-ninth of 23-Down
4. 28-Across plus 10-Down
6. One-third of 15-Down
7. 17-Across times 21-Down
10. 13-Across plus 28-Across
11. Consecutive digits in ascending order
13. Digits of 30-Down reversed
14. Three times 4-Across
16. Three hundred less than 27-Down
17. Five more than 32-Down
18. 33-Across plus 5-Down
19. Three hundred more than 12-Down
22. Five less than 27-Down
25. Consecutive digits in ascending order
26. Four more than 6-Across
28. One less than 18-Across
29. Two thousand less than 7-Across
31. One more than 1-Across
33. Same digit repeated
34. Digits of 14-Across rearranged

DOWN

1. Two hundred more than 29-Across
2. 25-Across plus 12-Down
3. Digits of 31-Across rearranged
4. Same digit repeated
5. One-third of 12-Down
8. Ninety less than 3-Down
9. 14-Across minus 28-Across
10. 12-Down minus 13-Across
12. 15-Down minus 20-Down
15. One hundred more than 31-Across
16. 16-Across minus 10-Down
19. 16-Down plus 26-Down
20. Nine more than 34-Across
21. 2-Down minus 24-Down
23. 1-Down plus 5-Down
24. One less than 33-Across
26. 26-Across minus 25-Across
27. Consecutive digits in ascending order
30. 32-Down minus 33-Across
32. 4-Across plus 5-Down

Solutions are on page 60

LOGIC PROBLEM 3

CASINO COUPLES

by Cheryl L. McLaughlin

Ten couples won raffle prizes at a recent community bazaar. The prizes were all the same — round-trip bus tickets to Atlantic City with meals and hotel accommodations provided. Upon arriving, they checked into the palatial Imperious Grand Plaza. Each couple had their own suite, which adjoined another suite that another couple stayed in. The couples were on floors one through five, with two couples on each floor. After unpacking, they headed straight for the casino. When the three-day trip was over, one person had won big, while everybody else either broke even or lost amounts that they didn't care to divulge. From the following clues, can you determine each couple's full name (one wife is Alicia, one husband is Peter, one last name is Arko, and each wife shares her husband's last name), hotel room, and who won money from the casino?

1. Jackie Wertz from the first floor, Reggie Gero, Sergey and his wife Stella from the third floor, and Mr. Bartok broke even at the end of their stay.
2. Marisa Ruiz played the slot machines and blackjack.
3. Max Baum and his wife were on the floor immediately below the Groz couple and in the suite two floors directly above Andy and his wife, who stayed in the room next to that of Candy and her husband.
4. Melodie and her husband Tex stayed in a "B" room, which was next to Walter and his wife and two floors directly below Jerry and his wife, who stayed two floors directly below Rita and her husband.
5. Kathy Anjou and her husband were in the room immediately below Dave Engel and his wife, immediately above Sonja and her husband, and next door to Astrid and her husband.
6. The person who won money from the casino stayed on the floor just below Bert's and two floors above the Nagio couple.

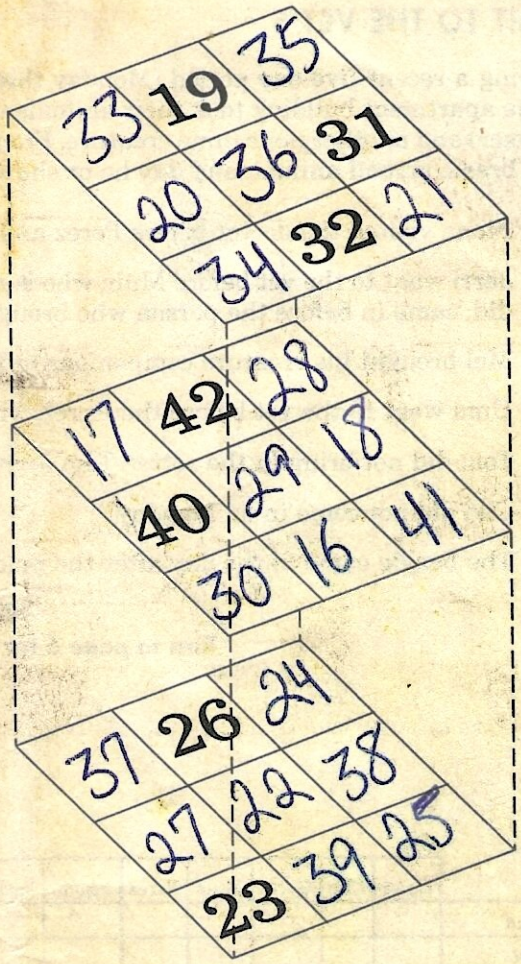
Solution is on page 62.

The fill-in chart below was found to be most helpful in solving this problem.

#501A	#501B
#401A	#401B
#301A	#301B
#201A	#201B
#101A	#101B

THREE-LAYER MAGIC

In this puzzle, the magic number square has been taken to new heights — literally! The diagram consists of three layers of numbers stacked on top of each other, each layer consisting of nine squares. Using the numbers from 16 through 42 once each, place the numbers into the squares so that the three numbers in the following add up to the same "magic number": 1. each row of each layer; 2. each column of each layer; 3. each stack directly down through all three layers; 4. each diagonal that crosses through the center square of the diagram (which is the center square of the middle layer). Diagonals that do not run through the center square of the diagram (for example, the diagonals of the top or bottom layers) do NOT add up to the magic number. Some of the numbers have been entered as a starting point; can you deduce the magic number and finish the puzzle? Solution is on page 60.



NUMBER PLACE

In these puzzles, your job is to place a number into each box so that each row across, each column down, and each small 9-box square within the larger square (there are 9 of these) will contain each number 1 through 9. Remember that no number may appear more than once in any row, column, or 9-box square; this will help you solve each puzzle. Solutions are on page 60.

1.

9	5			8				3
3				2	6	4		
		7	1				6	8
	6		8		4			2
7	2		9			8		
		4		7		6	5	
		1			5	2	8	
6				4	8		1	
	8	9	7					6

2.

	3	8			2	6		
7			4	9			2	
	2			8		1		9
		3		4	5			1
2	5		1				9	
1					6	3		8
		2	7	6			8	
8			3			5		4
	4	9			1		6	

3.

	2				6	7	1	
3		5		1				4
	4		7	9			8	
7		2			5			9
6			1				5	2
	9		3	2		6		
4		3			1	5		
	5			4		8		1
		8	5		7		9	

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LOGIC PROBLEM 4

VISIT TO THE VET'S

by Varda Reisner

During a recent five-day period (Monday through Friday), five pet owners (including Gertz) who live in the same apartment building took their animals to the vet for checkups. Each owner has a different dog (one has a boxer) and another noncanine creature. From the following clues, can you determine each owner's full name, dog breed, second animal, and day he or she visited the vet?

1. Fiona visited the doctor before Perez and after the terrier came in for a checkup.
2. Jerri went to the vet before Muir, who is not Fiona. Muir, who did not visit the vet the day before the boa did, came in before the person who brought in the iguana.
3. Mel brought his creature companions in before Caan and the day after the tarantula came in for a visit.
4. Uma went to the vet before the ferret, which came in before (but not the day before) the setter.
5. Tom did not bring in the setter. Tom arrived at the vet's the day after the boa.
6. Cho did not come in on Monday.
7. The beagle came in the day after the macaw. The chow and tarantula came in on different days.

Solution is on page 62.

Turn to page 6 for directions on using standard charts.

	Caan	Cho	Gertz	Muir	Perez	beagle	boxer	chow	setter	ter.	boa	ferret	iguana	macaw	tar.	Mo.	Tu.	We.	Th.	Fr.
Fiona																				
Jerri																				
Mel																				
Tom																				
Uma																				
Monday																				
Tuesday																				
Wednesday																				
Thursday																				
Friday																				
boa																				
ferret																				
iguana																				
macaw																				
tarantula																				
beagle																				
boxer																				
chow																				
setter																				
terrier																				

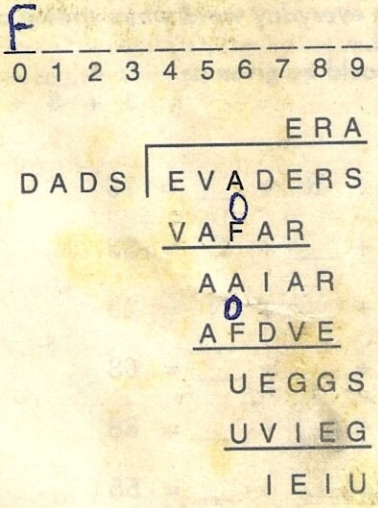
WORD ARITHMETIC

See page 10 for solving directions.

Answers are on page 65.

10.

11.



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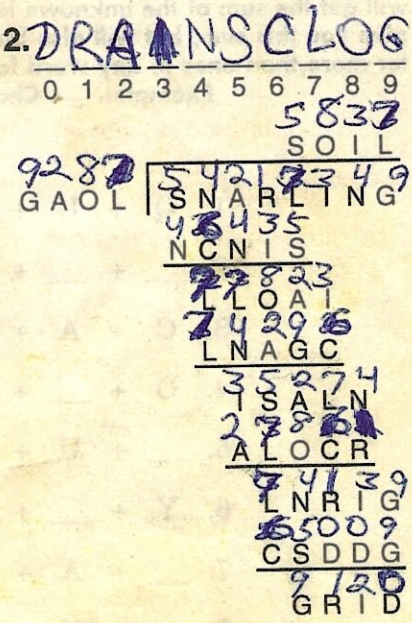

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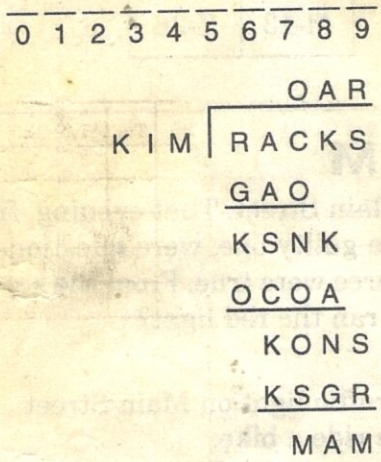

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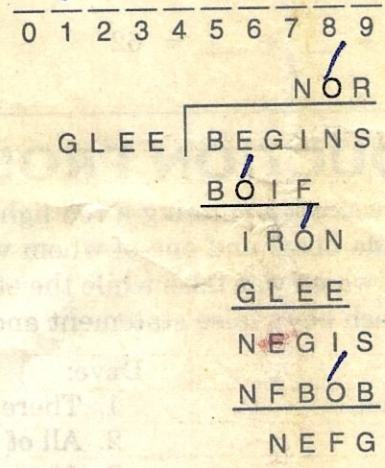

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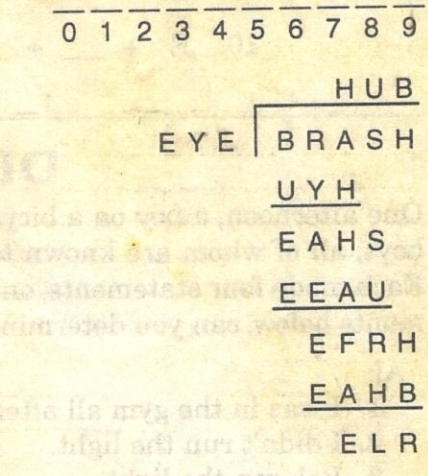

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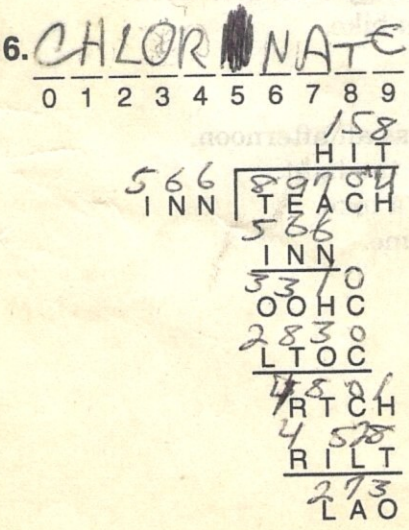

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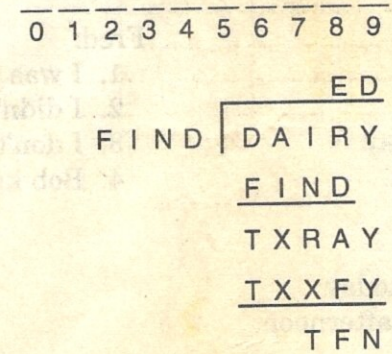

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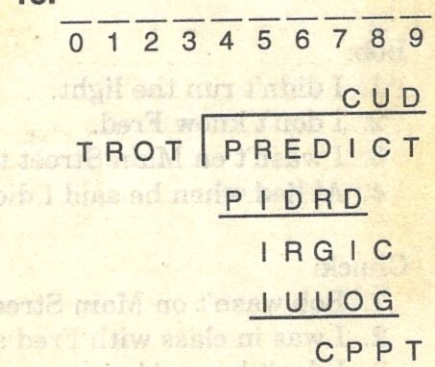


CALCULATE A WORD

This puzzle is based on the idea that A is 1, B is 2, C is 3, and so on, with Z being 26; B + C would equal 5. The object is to form everyday words so that the sum of the letter values equals the number given after each word equation. Solving hint: If you take the sum of the given letters in each set below and subtract it from the total, you will get the sum of the unknown letters. Then you can determine which letters, when added together, will not only give you this sum, but will also form an everyday word when written on the dashes provided. You may use a letter more than once in any word formed.

Our answers are on page 65.

Example: Chase would be given as C + ___ + ___ + S + ___ = 36 or
3 + 8 + 1 + 19 + 5 = 36

1. Q + U + ___ + R + ___ = 76
2. ___ + ___ + G + ___ + C = 33
3. C + A + ___ + ___ + N = 29
4. O + ___ + S + ___ + ___ = 63
5. ___ + U + R + ___ + ___ = 88
6. Y + ___ + ___ + L + ___ = 55
7. ___ + A + ___ + ___ + N = 35
8. ___ + U + ___ + A + ___ = 70
9. ___ + ___ + O + W + ___ = 77
10. E + ___ + ___ + ___ + ___ = 62

LETTER VALUES	
A-1	N-14
B-2	O-15
C-3	P-16
D-4	Q-17
E-5	R-18
F-6	S-19
G-7	T-20
H-8	U-21
I-9	V-22
J-10	W-23
K-11	X-24
L-12	Y-25
M-13	Z-26

DEDUCTION PROBLEM

One afternoon, a boy on a bicycle was seen running a red light on Main Street. That evening, five boys, all of whom are known to ride bikes and one of whom was the guilty one, were questioned. Each made four statements, one of which was false while the other three were true. From the statements below, can you determine each boy's false statement and who ran the red light?

Al:
1. I was in the gym all afternoon.
2. I didn't run the light.
3. Bob ran the light.
4. Chuck and I are friends.

Bob:
1. I didn't run the light.
2. I don't know Fred.
3. I wasn't on Main Street today.
4. Al lied when he said I did it.

Chuck:
1. Bob wasn't on Main Street today.
2. I was in class with Fred all afternoon.
3. I don't know Al.
4. Today was a school day.

Dave:
1. There is a traffic light on Main Street.
2. All of us can ride a bike.
3. Al was in the gym all afternoon.
4. Fred owns a bike.

Fred:
1. I was in class all afternoon.
2. I didn't run the light.
3. I don't own a bike.
4. Bob knows me.

Solution is on page 65.

LOGIC PROBLEM 5

FABULOUS FORGERIES

by Diane Yoko

Curators at the Metropolitan Art Museum were thrilled to learn that their institution had the opportunity to purchase some very old and very expensive works by five legendary artists, including Cagal. Each curator, including Adrian, has specialized knowledge of a different one of the artists, so before making the deal, each of them examined the painting by the artist he or she specializes in. To their dismay, four paintings were found to be forgeries. One, however, was genuine. From the following clues, can you determine each curator's artist and painting (one was called "Farm"), and each painting's price and why four were fake and which one was genuine?

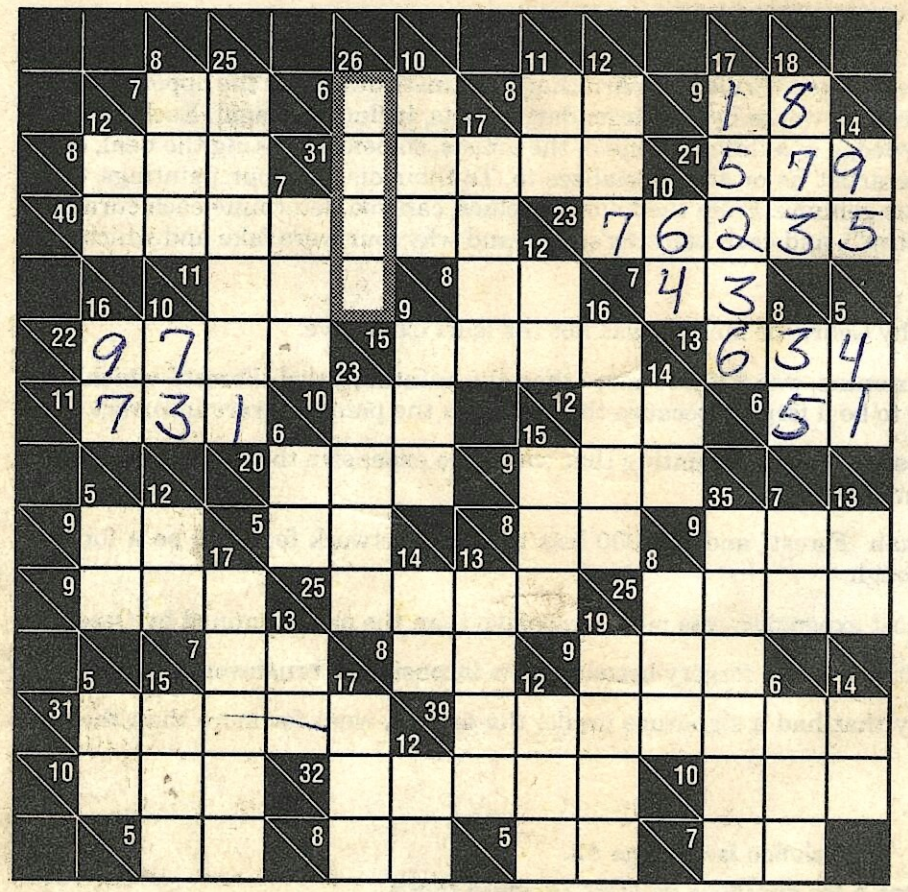
1. The Doli, which wasn't looked at by Cedric or Melina, was not the least expensive.
2. The Gogan, which Cedric didn't examine, was $25,000 more than the painting titled "Forest," which was $25,000 more than the one found to be a forgery because the details in the painting were incorrect.
3. Melina, who didn't look at "Horses," looked at a painting that was more expensive than the one found to be a forgery because of inconsistent brushwork.
4. The Manay was $50,000 more than "Forest" and $25,000 less than the artwork found to be a forgery because the canvas wasn't old enough.
5. The Renwa, which was not the most expensive, was more expensive than the one examined by Oscar.
6. "Night," which was going for $150,000, was a forgery because of its inconsistent brushwork.
7. "Pond," which was not the forgery that had a signature unlike the artist's, went for more than the one Ruby looked at.
8. The details in "Horses" were fine.

Solution is on page 62.

Turn to page 6 for directions on using standard charts.

	Cagal	Doli	Gogan	Manay	Renwa	"Farm"	"Forest"	"Horses"	"Night"	"Pond"	prices					brush.	can.	det.	gen.	sign.
Adrian																				
Cedric																				
Melina																				
Oscar																				
Ruby																				
brush-work																				
canvas																				
details																				
genuine																				
signa-ture																				
prices																				
"Farm"																				
"Forest"																				
"Horses"																				
"Night"																				
"Pond"																				

CROSS SUMS

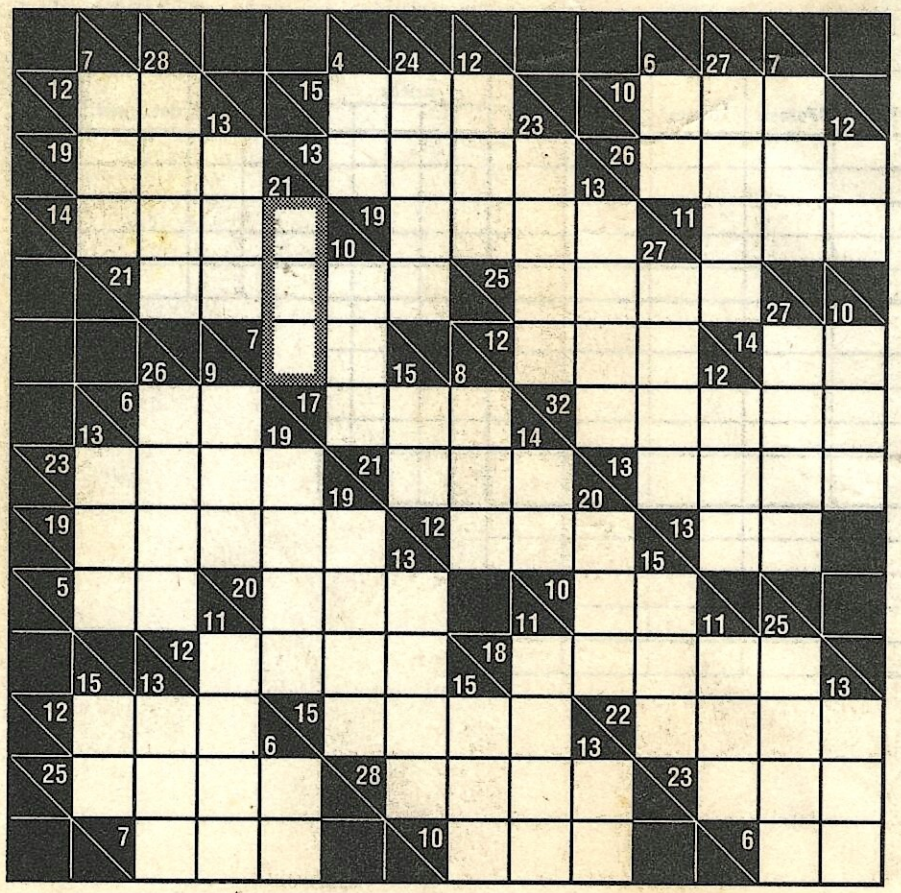


5.

We have outlined one area in each diagram on these two pages. If you need help starting a puzzle, the digit combination to go into that area is listed on page 65.

Solutions are on page 59.

Directions for solving are on page 12.



6.

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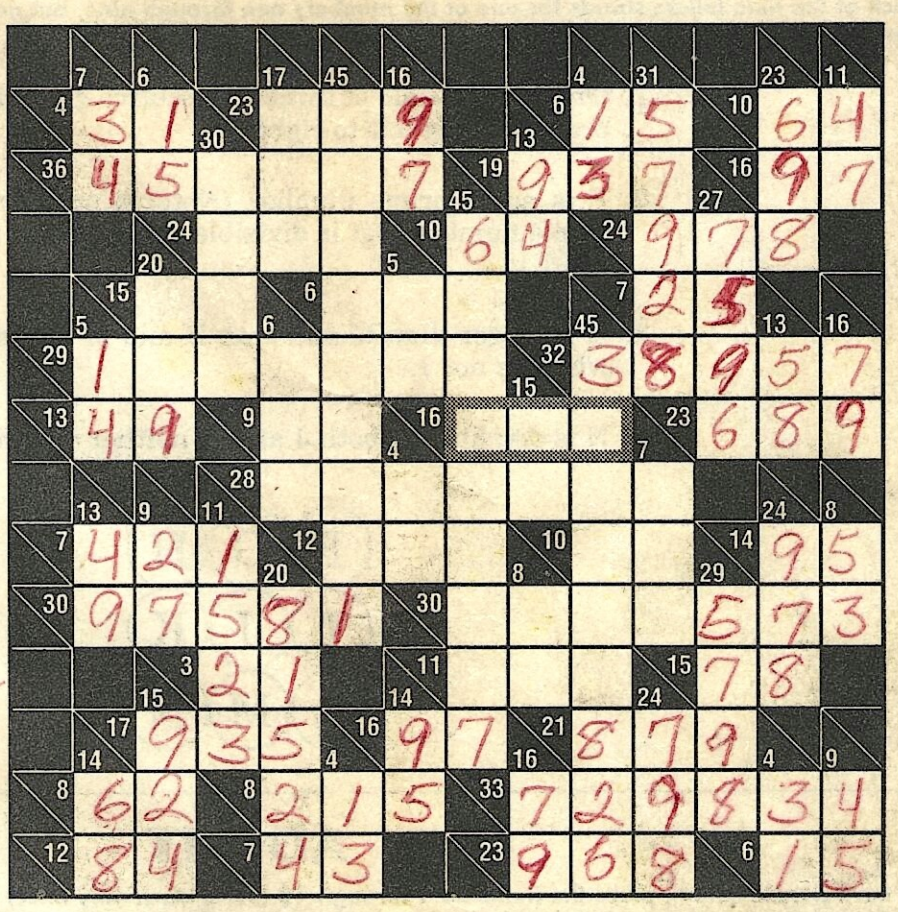
CROSS SUMS

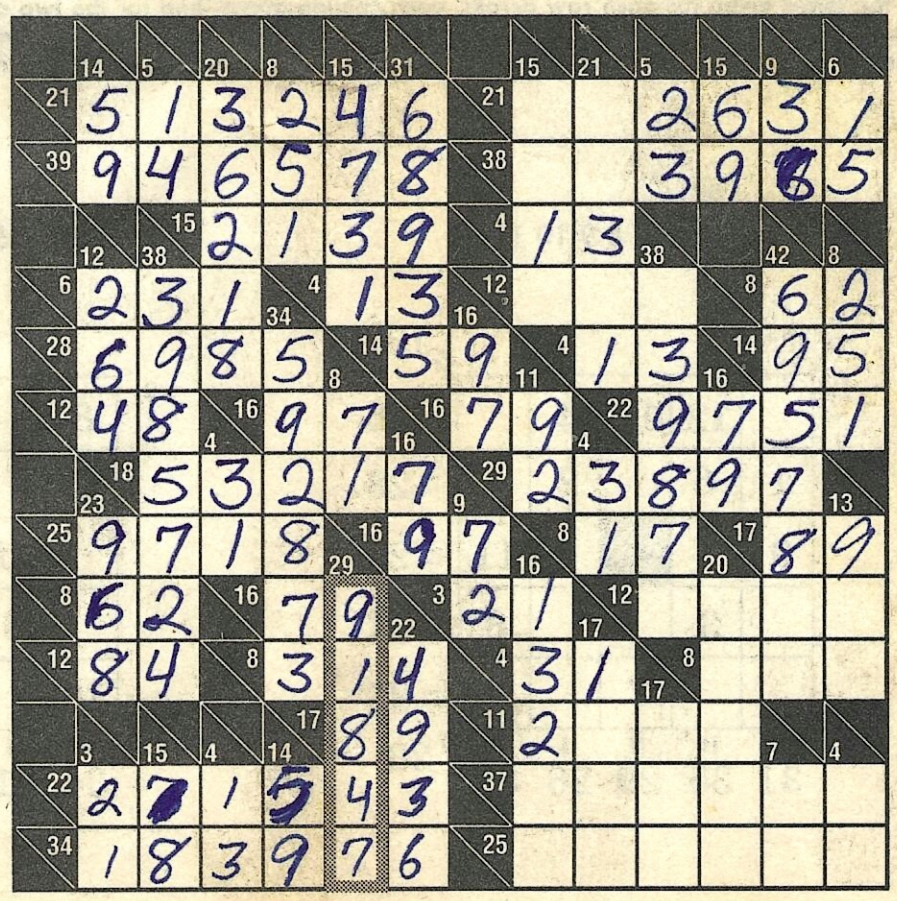
7.

Solutions are on page 59.



These, my dear Arny, are called CLASSIC NUMBERS! maybe since they opened up Davis in 1962!

8.



Dana's mother's "Allie"

234 ~~+29~~
235 147
236
237
245
246
345

CRYPTIC MATH

Each of the nine letters stands for one of the numbers one through nine, but no two letters stand for the same number. Using the clues, can you deduce the number represented by each letter? **Answer is on page 62.**

1. One row consists of three consecutive digits in ascending order reading left to right.

2. F is not a prime number. (Note: A prime number is a whole number that is divisible only by itself and 1 and is not 1.)

3. H is larger than M and both H and M are divisible by I, which is not 1.

4. N is divisible by both J and L, neither of which is 1.

F	G	H
I	J	K
L	M	N

ADD-IT

In each puzzle below, place the numbers 1 through 12 (using each only once) into the appropriate boxes to arrive at the totals given for each row across, each column down, and for the two diagonal rows (because of the black box, some will involve adding four numbers and some will involve adding five). It's a good idea to cross off each number as you enter it, since you will use it only once for each of the diagrams. **Solutions are on page 61.**

1 2 3 4 5 6 7 8 9 10 11 12

1.

					= 13
	12	10	4		= 36
1	6		2		= 28
9		■		11	= 26
	3			8	= 31
		7		5	= 35
=	=	=	=	=	= 28
31	35	29	26	35	

1 2 3 4 5 6 7 8 9 10 11 12

2.

					= 26
8		7	3		= 33
4				5	= 27
	11	■		12	= 33
	2	6	9		= 24
10			1		= 39
=	=	=	=	=	= 28
34	31	32	20	39	

BINGO PLAYS 2 & 3

Directions for solving Bingo Plays are on page 7.

1. The number one does not appear on the card as a single-digit number, nor does it appear in row P, column N, or square LB, LG, LO, AI, AO, or SG.
2. The number two does not appear in row Y or square PO, LN, LG, AB, AO, SB, SI, SN or SO.
3. The number three does not appear in row Y, column B or G, or square PO, LO, AO, or SI.
4. The number four does not appear in row P, L, or A, column B or O, or square SN or SG.
5. The number five does not appear in column N or square PI, LB, LI, AB, AI, YB, YG, YO, SB, or SO.
6. The number six does not appear in row S, column I or G, or square YO.
7. The number seven does not appear on the card as a single-digit number, nor does it appear in row P, L, or A, column G, or square SN.
8. The number eight does not appear in column I, square PO, LG, LO, AO, YB, SB, or SG, or in the winning combination.
9. The number nine does not appear on the card as a single-digit number, nor does it appear in row A, column G, square PN, LN, SI, or SN, or in the winning combination.
10. Zero does not appear in column G or square PI, LI, AI, YO, or SO.
11. The number 55 is the only same-digit double-number combination on the card.

	B	I	N	G	O
P	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
L	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
A	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	FREE	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
Y	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
S	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

---

1. The number one does not appear on the card as a single-digit number, nor does it appear in row P, column O, or square LI, LN, LG, AB, YN, or SB.
2. The number two does not appear in row Y or S, column G, or square PN or LO.
3. The number three does not appear on the card as a single-digit number, nor does it appear in row L, A, or Y, column I or O, or square PG.
4. The number four does not appear in row P or A, column O, or square LI, YG, or SN.
5. The number five does not appear in row S, column B or O, or square PN or AI.
6. The number six does not appear on the card as a single-digit number, nor does it appear in column G, square PI, LI, AI, or YO, or in the winning combination.
7. The number seven does not appear on the card as a single-digit number, nor does it appear in row L or A, column I or G, or square PN or SN.
8. The number eight does not appear in row P, column I, or square LO, AO, YB, YG, SN, or SO.
9. The number nine does not appear on the card as a single-digit number, nor does it appear in row P, column G, or square LO, AO, YI, SN, or SO.
10. Zero does not appear in square PI, LB, LI, LN, AI, YB, or YN or in the winning combination.
11. The number 66 is the only same-digit double-number combination on the card.

	B	I	N	G	O
P	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
L	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
A	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	FREE	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
Y	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75
S	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	61 62 63 64 65 66 67 68 69 70 71 72 73 74 75

Solutions are on page 60

LOGIC PROBLEM 6

TECHNICALLY SPEAKING

by Virginia C. McCarthy

Infinity Technical School offers two-year programs that lead the way to well-paying jobs. One reason why their programs are so successful is that the school also requires students to pass nontechnical subjects as well (these are English, philosophy, U.S. history, U.S. literature, world history, and world literature). Part of the school is a rectangular building with six classrooms lined up one after the other from left to right. In each classroom a different technical course and a different nontechnical course are taught; a different instructor teaches in each classroom (including Mr. Young). From the following clues, can you determine each instructor's technical course (one is heavy-machinery operation), nontechnical course, and classroom?

1. The two end classrooms are, in some order, where Ms. Edelman teaches and where U.S. literature is taught.
2. Carpentry is taught between where auto mechanics is taught and where world history is instructed. The carpentry class is not adjacent to either the auto-mechanics classroom or the world-history classroom.
3. Mr. Norris's classroom is farther to the right than to the left; his classroom is not next to Ms. Nesby's.
4. The classroom where philosophy is taught is next to the class where computer programming is taught.
5. World literature is offered in one classroom and air-conditioning repair is instructed in another. Neither is taught by a female instructor.
6. The classrooms where Mr. Cruz and Ms. Nesby teach are to the right of where English is taught.
7. Mr. Hailey's classroom is to the right of where electronics is taught and to the left of Ms. Edelman's.

Solution is on page 62.

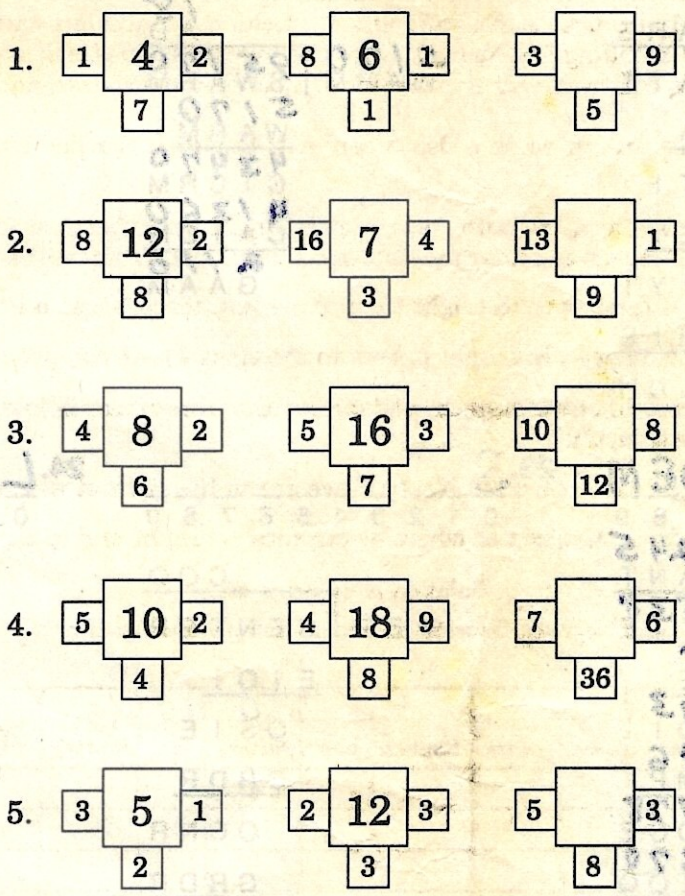
Turn to page 6 for directions on using standard charts.

	air	auto	car.	com.	elec.	heavy	English	phil.	U.S. history	U.S. lit.	world history	world lit.	#1	#2	#3	#4	#5	#6
Cruz																		
Edelman																		
Hailey																		
Nesby																		
Norris																		
Young																		
#1																		
#2																		
#3																		
#4																		
#5																		
#6																		
English																		
philosophy																		
U.S. history																		
U.S. literature																		
world history																		
world literature																		

MATHEMATICAL DEDUCTION

Each puzzle below consists of two completed sets and one uncompleted set. To solve, use math and deductive reasoning to figure out the mathematical sequence used to arrive at the numbers in the center boxes of the two complete sets, and so discover what number belongs in the blank box of the third. Each puzzle has a sequence which is carried through for all three sets. You might use addition, subtraction, multiplication, or division. No fractions or negative numbers are involved, and each number surrounding its center box will be used exactly once.

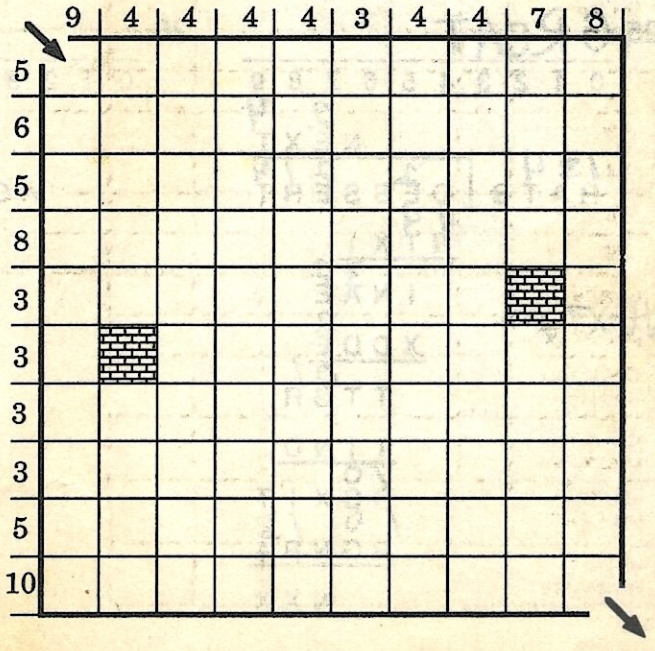
Answers are on page 65.



MATH MAZE

The goal here is the same as in any maze: Draw a single line from start to finish without crossing your own path. What makes this special, though, is that you'll have to use some deductive reasoning to find your way. The maze is divided into squares; the number at the beginning of each row and column tells you exactly how many of those squares to cross through in order to correctly reach the finish. For example, in this maze, the number 9 is at the beginning of the first column down; this means you must cross through nine of the boxes in that column once each. You need not cross through them at once; you may leave a row or column and return to it — you might cross the first box of the first column, then continue straight across, but you would have to return to the first column later so that you use exactly nine boxes before you finish the maze. No diagonal moves are allowed. Solving hint: To begin, blacken any box that you determine will not be used, and place a dot in any box that you know must be used. Do not pass through the bricked-in boxes.

Solution is on page 61.



WORD ARITHMETIC

See page 10 for solving directions.

Answers are on page 65.

19.

0 1 2 3 4 5 6 7 8 9

```
        ARE
HALE | STRAIT
       EENA
       HNATI
       HINEY
        HHIYT
       HTRIS
         LNH
```

20. MAGICWORDS

0 1 2 3 4 5 6 7 8 9

```
          18
         AD
5170 | 95170
WARM | SWARM
       5170
       WARM
       43470
       CICRM
       41360
       CAIOM
        2110
        GAAM
```

21.

0 1 2 3 4 5 6 7 8 9

```
        HID
RON | ROBBED
      RRBI
        HNE
       SDR
        IZD
       INS
         S
```

22. QUAINTPOEM

0 1 2 3 4 5 6 7 8 9

```
          245
         ANT
874 | 2145338
EON | AUNTIE
      1748
      UONE
      3973
      IMOI
      3496
      INMP
       4778
       NOOE
       4370
       NIOQ
        408
        NQE
```

23. S

0 1 2 3 4 5 6 7 8 9

```
        COO
PEP | CENTER
      EIOI
        0
       OSIE
       CRDR
        OCNR
       CRDR
         0
         NPS
```

24. LIGHTROBES

0 1 2 3 4 5 6 7 8 9

```
          158
         IRE
587 | 93154
REB | SHIRT
      587
      REB
      3445
      HTTR
      2935
      GSHR
       5104
       RILT
       4696
       TOSO
        408
        TLE
```

25. GREAT

0 1 2 3 4 5 6 7 8 9

```
          24
         NEXT
134 | 2 214
RATS | DESSERT
       44
       NTXI
         32
         INAE
         2
       XDDE
         01
         TTGR
       IIND
       10
       RGXIT
       10 13
       RGNRA
         NXX
```

ID NEXT ≠ 1

26.

0 1 2 3 4 5 6 7 8 9

```
        OFF
WOO | GORED
      UNN
       RDDE
      RURB
        RUED
      RURB
         GD
```

27. Y

0 1 2 3 4 5 6 7 8 9

```
        AID
DEAN | TISSUES
      TSSAA
      9
       EYDAE
      EANAI
        9
        EEYIS
      TLIUD
        DSDD
```

LOGIC PROBLEM 7

LEAVING LAS VEDAS

by Mary Marks Cezus

Five people who live in Las Vedas decided to take vacations during a recent week. Each person went to a different destination and each destination was a different number of miles away from Las Vedas. Each person left on a different day (Monday through Friday). From the following clues, can you determine each person's full name, destination, number of miles traveled (including 65, 235, 285, and 375), and day of departure?

1. The person who traveled the farthest left sometime before the person who went to Pelham Lake.
2. The one who went to Bisco Beach did not travel the farthest and left immediately after Pei.
3. Maggie and Stein had planned their getaways for weeks.
4. The one who traveled 185 miles departed after Hetz.
5. The person who went to Peacock Springs and Theo were, in some order, the first and last to leave.
6. Maggie's destination was at least 100 miles farther than Boyle's.
7. Neither Pei nor Starr went to Hanley Preserve. Starr departed before Emily.
8. Dave left immediately before and immediately after, in some order, Hetz and the one who went to Pelham Lake.
9. Of the women, one left on Tuesday and the other went to Garnet Park, which was not the farthest destination.
10. Roy traveled fewer miles than Boyle.

Solution is on page 63.

Turn to page 6 for directions on using standard charts.

	Boyle	Hetz	Pei	Starr	Stein	Bisco	Garnet	Hanley	Peacock	Pelham	65	185	235	285	375	Mo.	Tu.	We.	Th.	Fr.
Dave																				
Emily																				
Maggie																				
Roy																				
Theo																				
Monday																				
Tuesday																				
Wednesday																				
Thursday																				
Friday																				
65																				
185																				
235																				
285																				
375																				
Bisco Beach																				
Garnet Park																				
Hanley Preserve																				
Peacock Springs																				
Pelham Lake																				

FIGURE LOGIC 4

by Linda Thistle

Directions for solving Figure Logic are on page 9. This puzzle is a cube — so instead of entering numbers in two directions, you will enter numbers in three. Direction A goes down and to the left, Direction B goes down and to the right, and Direction C goes across.

A starting help is on page 65.

DIRECTION A

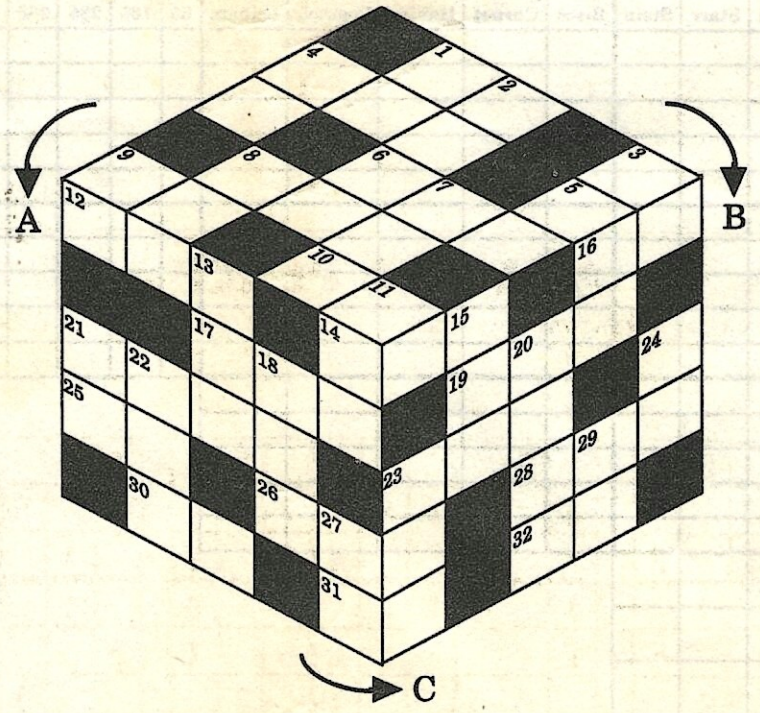
1. Digits of 25-C reversed
2. 9-A times 8-B
3. 21-C minus 20-B
4. 1-A minus 3-B
7. 9-B times 29-B
8. 10-B minus 4-B
9. Consecutive digits
11. 12-C plus 28-C
13. 4-A times 27-A
18. 15-B minus 4-A
21. 27-A plus 3-B
22. 6-B minus 15-B
27. Three times 9-B

DIRECTION B

1. 32-C minus 3-B
3. One more than 31-C
4. 25-C plus 32-C
5. Six times 4-B
6. Three times 17-C
8. 5-B minus 28-C
9. Same digit repeated
10. Four times 28-C
15. 2-A minus 20-B
20. 24-B times 28-C
23. Different multiples of three
24. Digits of 21-A reversed
29. Three less than 16-C

DIRECTION C

12. 7-A minus 6-B
14. 1-A times 9-B
16. 27-A plus 1-B
17. One-half of 19-C
19. 13-A plus 27-A
21. 22-A times 30-C
23. One-third of 7-A
25. Two less than 24-B
26. 8-B plus 17-C
28. 23-C minus 4-B
30. Digits of 9-A reversed
31. Three times 4-A
32. 28-C minus 16-C



Solution is on page 60

NUMBERAMA

Can you discover the logical pattern for each number sequence below and thereby discover the missing number (shown by the dash)? **Answers are on page 65.**

For example, for: 26 16 20 11 ___ 7 11 4 8, the solution is:

26(-10)=16(+4)=20(-9)=11(+4)=15(-8)=7(+4)=11(-7)=4(+4)=8.

A.	17	34	26	43	___	52	44	61	53	
B.	6	1	3	7	___	8	10	14	20	
C.	3	24	12	10	___	40	20	18	9	
D.	11	18	27	9	___	14	27	9	3	
E.	4	16	12	8	___	21	18	36	34	32
F.	28	4	8	24	___	6	12	36	54	
G.	32	16	4	24	___	4	1	6	2	
H.	1	3	15	5	___	27	12	36	48	28
I.	8	1	4	12	___	1	3	6	2	
J.	12	6	1	8	___	1	8	6	5	40
K.	2	12	4	24	___	16	8	48	12	

NUMBER PLACE

Turn to page 17 for directions on solving Number Place.

Solutions are on page 60.

4.

9		7		3			8	
5			2	8		6		
	1				5	3		2
4		2		6			1	
	9		7			5		8
		8	5		1		4	
		4			3	7		9
	6		9	1			2	
2	3				7			4

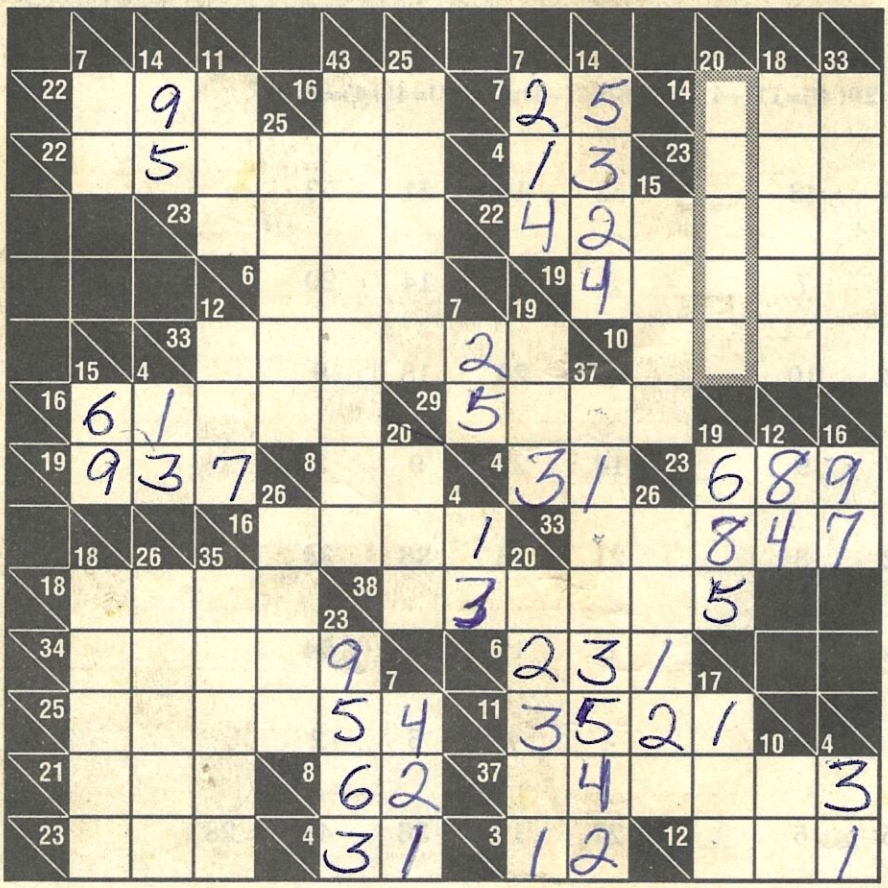
5.

	2	7	5				3	
4			2	8		7		
		9			4	6		8
1			6	3				9
9					2	8		1
	8	5			1		7	
		1		2		4	8	
	3			9	5			6
2	6		8				5	

6.

7				4				1
		9			6		8	
	4		5			2		
	1		2				4	
8				1		7		
		3			5			9
3					2			6
	6		4				9	
	8	4		7		3		

CROSS SUMS



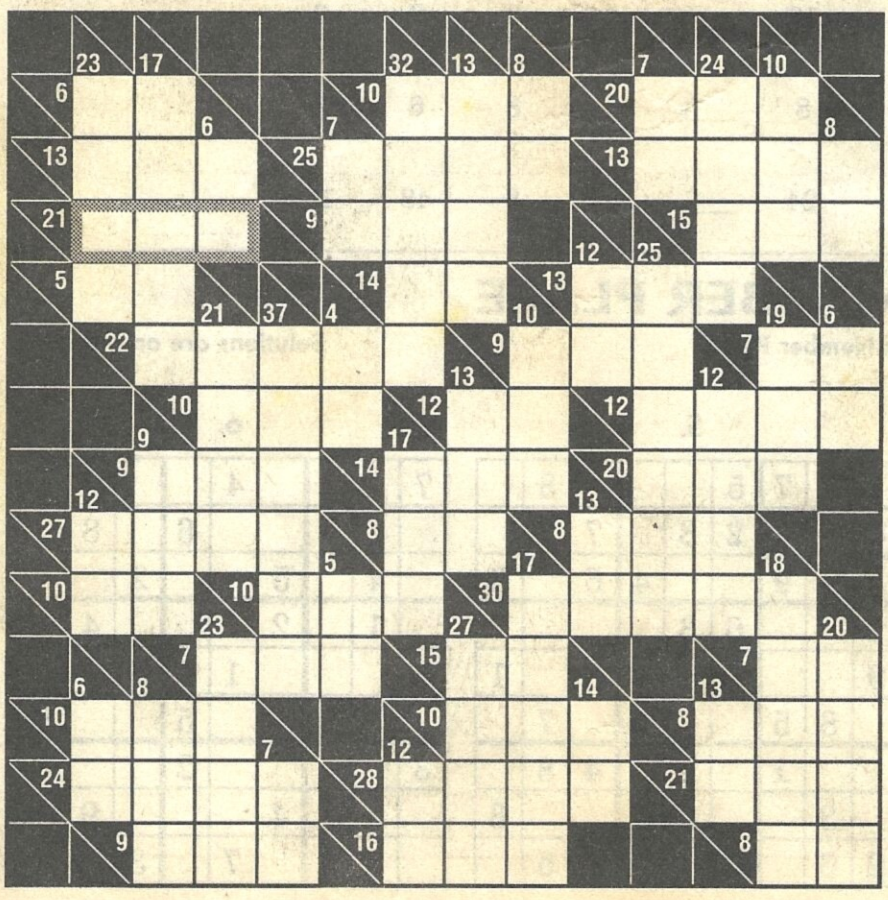
9.

We have outlined one area in each diagram on these two pages. If you need help starting a puzzle, the digit combination to go into that area is listed on page 65.

Solutions are on page 59.

Directions for solving are on page 12.

16



10.

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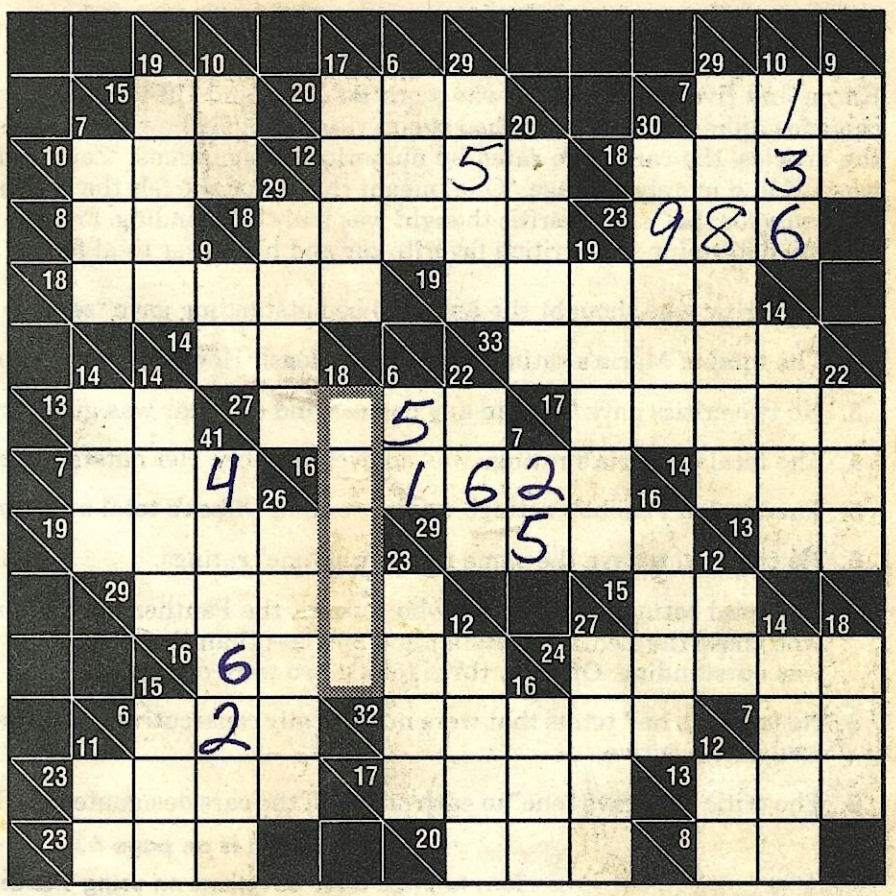
CROSS SUMS

11.

Solutions are on page 59.



12.

Should next year's screen name be this:

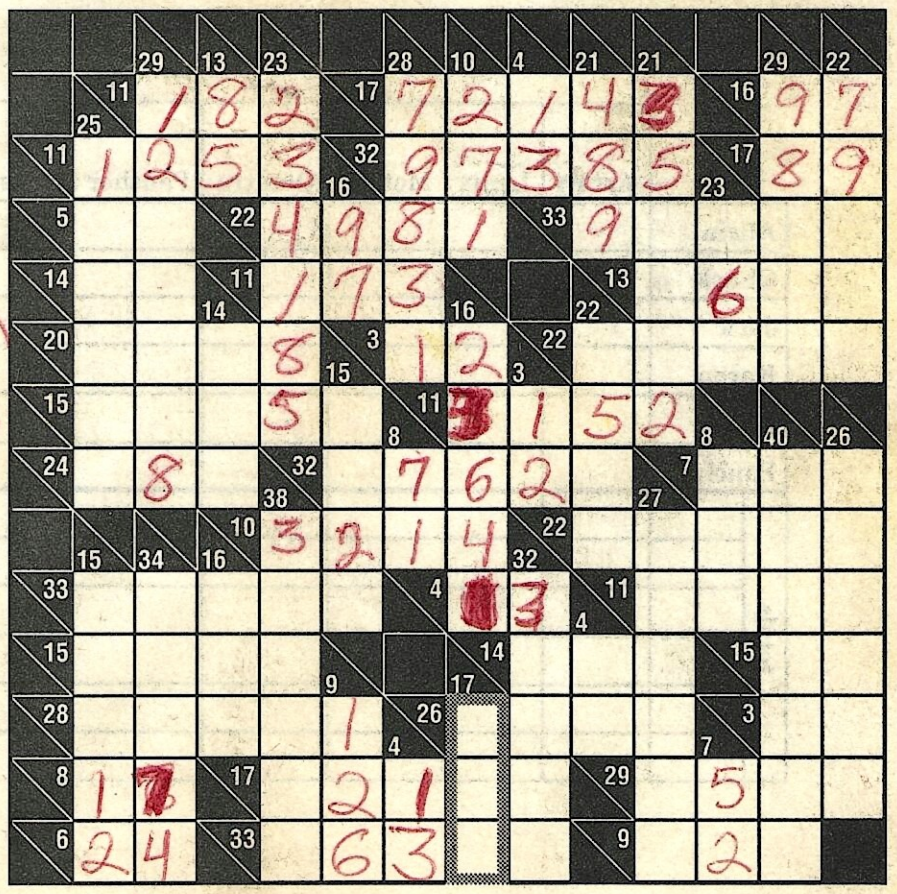
MarCarDa@aol.com

MDCV1605@aol.com

Chuck E. Cheese

cello wire?

For a girlfriend?



LOGIC PROBLEM 8

CAR CRITICS

by Evelyn B. Rosenthal

Karen and five other writers who work for Road and Off-Road, a magazine for automobile buyers and aficionados alike, recently published their critiques of six new car models (including the Shasta). At the end of the articles, the cars were rated by numerical designations. "Zero" indicated that the critic thought the car was OK and merely average. "One" meant that he or she felt the car was of above-average quality. "Two" was used only for that car the critic thought was truly outstanding. From this information and the following clues, can you determine each critic's favorite car and his or her total for the six automobiles?

1. The critic who thought the Astari to be outstanding gave "zero" to each of the other cars.
2. The total of Maria's ratings was not the least. However, Maria's total was less than Alicia's total.
3. No two critics gave "two" to any one car and each car was given "two" by a different critic.
4. The total of Maria's ratings was an even number. Her outstanding car was not the Panther.
5. The total of Pancho's ratings was more than Chuck's total and less than Jack's total.
6. No two critics gave the same number of "one" ratings.
7. The total ratings of the critic who thought the Panther outstanding was more than the total of the one who chose the Lenix as outstanding and less than the total of the one who maintained that the Olantra was outstanding. Of these three totals, two were odd numbers.
8. No two men had totals that were numerically consecutive and no two women had totals that were numerically consecutive.
9. The critic who gave "one" to each of five of the cars designated the Meteor as his or her outstanding auto.

Solution is on page 63.

Turn to page 6 for directions on using standard charts.

	Astari	Lenix	Meteor	Olantra	Panther	Shasta	totals					
Alicia												
Chuck												
Jack												
Karen												
Maria												
Pancho												

totals							

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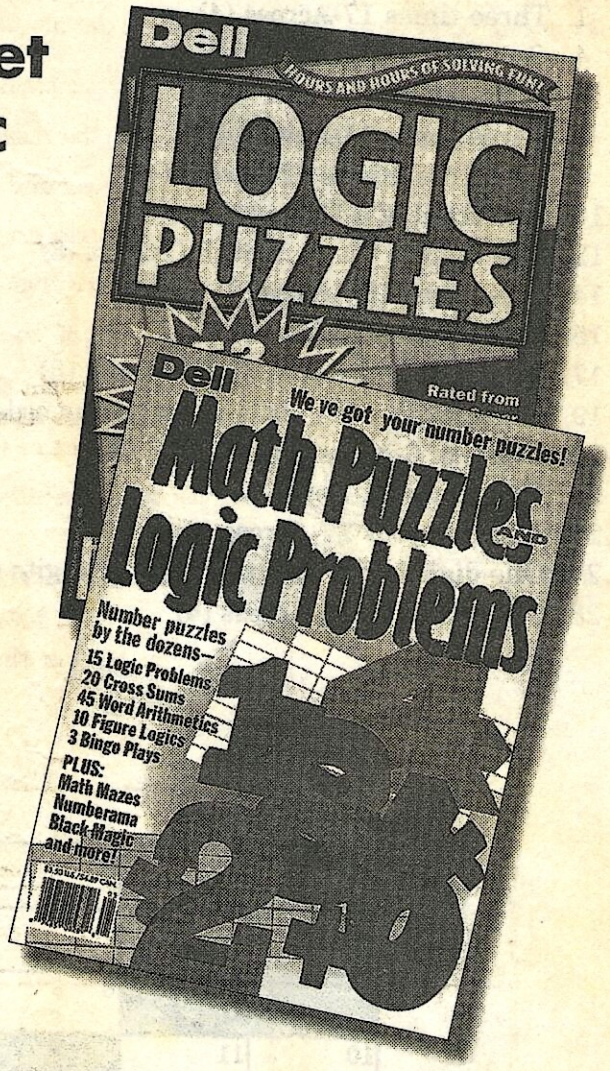

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FIGURE LOGIC 5

by Linda Thistle

Turn to page 9 for directions on solving Figure Logics. In this puzzle, you must determine if one or two digits go into each box. The number in parentheses after each clue indicates how many digits are in that answer.

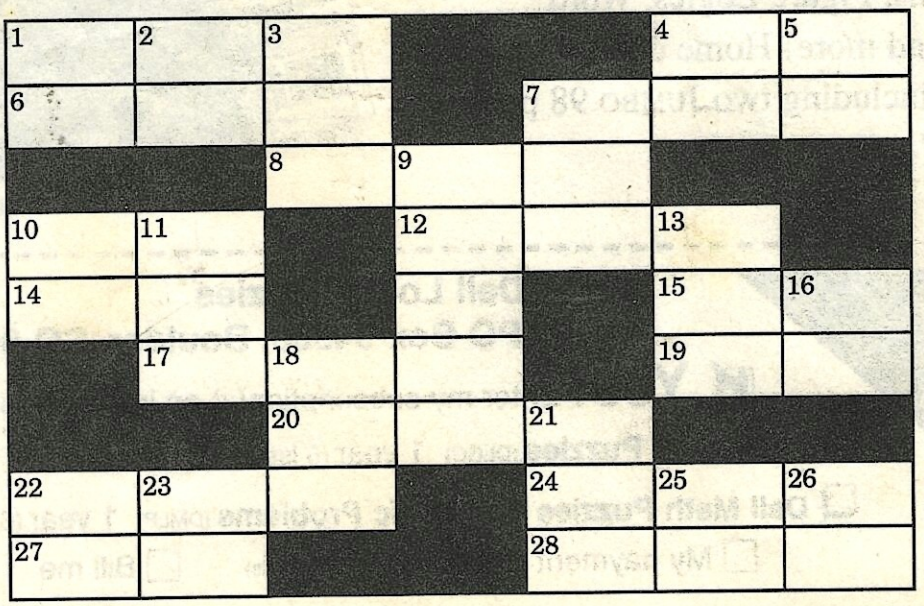
A starting help is on page 65.

ACROSS

1. Three times 17-Across (4)
4. One-half of 25-Down (2)
6. Different even digits (4)
7. Three times 11-Down (4)
8. 20-Across minus 12-Across (4)
10. One-third of 4-Down (2)
12. One digit is the sum of the others (3)
14. Five times 19-Across (3)
15. 5-Down plus 13-Down (3)
17. One digit is the sum of the others (3)
19. Consecutive even digits in ascending order (2)
20. Digits of 6-Across rearranged (4)
22. Two times 21-Down (4)
24. 4-Across plus 27-Across (3)
27. One digit is the sum of the other digits (3)
28. 3-Down minus 8-Across (4)

DOWN

1. One digit is two times the other digit (2)
2. Seventy less than 18-Down (3)
3. One-fourth of 9-Down (4)
4. One digit is the square of the other digit (2)
5. Consecutive digits in some order (3)
7. Sum of its digits is 1-Down (4)
9. Consecutive digits in ascending order (5)
10. One digit is two times the other digit (2)
11. Sum of the digits is 10-Across (4)
13. One digit is the sum of the other digits (3)
16. One digit is the sum of the other digits (3)
18. One digit is the sum of the other digits (3)
21. Sum of the digits is 10-Down (4)
22. Different odd digits (3)
23. One digit is the sum of the other digits (3)
25. Same digit repeated (2)
26. Four less than 17-Across (3)



Sam 523@ home. com

Solution is on page 60

WORD ARITHMETIC

See page 10 for solving directions.

Answers are on page 65.

28. USINGPOWER

0 1 2 3 4 5 6 7 8 9

```
          1 5 1
          S I P S
5238  | 6 5 5 0 8 1
PINE  | O P P O S E S
      - 5 2 3 8
        P I N E
      - 1 3 1 8 1
        S N S E S
      - 1 0 4 7 6
        S U G W O
      - 2 7 0 5 8
        I W U P E
      - 2 6 1 9 0
        I O S R U
      - 8 6 8 1
          E O E S
        - 5 2 3 8
          P I N E
        - 3 4 4 3
          N G G N
```

29. BAGOFPLUMS

0 1 2 3 4 5 6 7 8 9

```
            2 3 1
            G O A
936  | 2 7 6 6 3 9
SOL  | G A L L O P
     - 1 8 7 2
       A M U G
     - 2 9 4 3
       G S F O
     - 2 8 0 8
       G M B M
     - 1 3 5 5
       A O P P
     -   9 3 6
         S O L
       - 4 1 9
         F A S
```

30. KNE

0 1 2 3 4 5 6 7 8 9

```
          1
          N O R
LOT  | S T O R K
     - L O T
       2
       E O R R
     - 2 2
       E E C T
     - T C T K
     - T T R K
     -     2 0
       R K I
```

31.

0 1 2 3 4 5 6 7 8 9

```
          O N
SASH  | N A I L S
      - S A S H
        I K N A S
      - I A K B P
        O K O S
```

32. L

0 1 2 3 4 5 6 7 8 9

```
          O U T
GOO  | V E R G E D
     - E R L L
       9 9
       V R I E
     - V T O V
       O O L D
     - O E G T
       V V T
```

33. THICKALBUM

0 1 2 3 4 5 6 7 8 9

```
              3 5 9
              C A M
264  | 9 5 0 8 8 1
ILK  | M A T C H
     - 7 9 2
       B M I
     - 1 5 8 3
       H A U C
     - 1 3 2 0
       H C I T
     - 2 6 3 1
         I L C H
       - 2 3 7 6
         I C B L
       -   2 5 5
           I A A
```

34. WACKYPROSE

0 1 2 3 4 5 6 7 8 9

```
            5 7 5
            P O P
149  | 8 5 7 3 9
AYE  | S P O K E
     - 7 4 5
       O Y P
     - 1 1 2 3
       A A C K
     - 1 0 4 3
       A W Y K
     - 8 0 9
         S W E
       - 7 4 5
         O Y P
       - 6 4
           R Y
```

35. H

0 1 2 3 4 5 6 7 8 9

```
          O N
ERIE  | S N O R E
      - N N R O
        8
        E H C T E
      - 0 0
        E H H N N
        A I A
```

36.

0 1 2 3 4 5 6 7 8 9

```
          A L
TOSS  | C L A N S
      - U S A T
        O N Y K S
      - O N C T N
        T U S
```

LOGIC PROBLEM 9

BOOKSTORE BUYS

by Mary Marks Cezus

Galleria Bookstore received four eagerly awaited books that were expected to be big sellers. Each book was of a different genre. During a recent morning, four customers bought a different title of each of these books. Each book was a different price ($24, $27, $30, and $33). From the following clues, can you determine each customer's full name, book title, book's genre, and its price?

1. The one who bought "Fancy" spent less than the one who bought the science-fiction book and more than Gilliant.
2. Neither Virgil nor Styron bought "Wisdom."
3. Rita, who didn't purchase the sci-fi book, and Burns, who didn't pick up "Jinx," had been in the bookstore the previous week.
4. The one who bought the biography, who was not Gilliant, and Virgil both made quick purchases.
5. The one who bought the how-to book, who was not Styron, spent more than Terry and less than Burns.
6. Virgil spent more than the one who bought "Sable," which was not purchased by Landon.
7. Wendy and the one who bought "Wisdom" used credit cards for their purchases.
8. The one who bought "Sable," who was not Styron, and the one who bought the mystery have been going to the bookstore for years.

Solution is on page 63.

Turn to page 6 for directions on using standard charts.

	Burns	Gilliant	Landon	Styron	"Fancy"	"Jinx"	"Sable"	"Wisdom"	bio.	how-to	mys.	sci-fi	$24	$27	$30	$33
Rita																
Terry																
Virgil																
Wendy																
$24																
$27																
$30																
$33																
biography																
how-to																
mystery																
science fiction																
"Fancy"																
"Jinx"																
"Sable"																
"Wisdom"																

OUT AND AROUND

To solve this puzzle, fill in the diagram by answering the clues given below. In some instances, you will find that answering the clues requires some deduction and that it will be necessary to work back and forth among the clues in order to solve one. The puzzle works in two directions: The answer to each OUTWARD clue is a two-digit number to be entered outward from the center of the circle. For example, if the answer to OUTWARD clue 1-9 were 37, then you would enter a 3 in the space marked "1" and a 7 in the space marked "9." Each space in the diagram contains only one digit. The answer to each CLOCKWISE clue is a three-digit number to be entered in a clockwise direction. For example, if the answer to clue 1-3 were 579, then you would enter a 5 in the space marked "1," a 7 in the space marked "2," and a 9 in the space marked "3." Note that CLOCKWISE answers overlap. For instance, the last digit of the answer to clue 1-3 is the first digit of the answer to clue 3-5.
NOTE: There are no zeros in this puzzle. A perfect square is the product of one number multiplied by itself; 16 is a perfect square because 4 x 4 = 16. A prime number is a number larger than 1 and divisible only by 1 and itself.

OUTWARD

1-9. There is a digit larger than 1 that is a divisor of both of these digits

2-10. A number that is seven less than some perfect square

3-11. A perfect square

4-12. A number divisible by 8

5-13. Other clues will help you determine this number

6-14. A perfect square

7-15. A prime number

8-16. A prime number

CLOCKWISE

1-3. The first digit is the sum of the second and third digits

3-5. Three consecutive digits in some order

5-7. Three different digits and the first and third digits, at least, are prime numbers

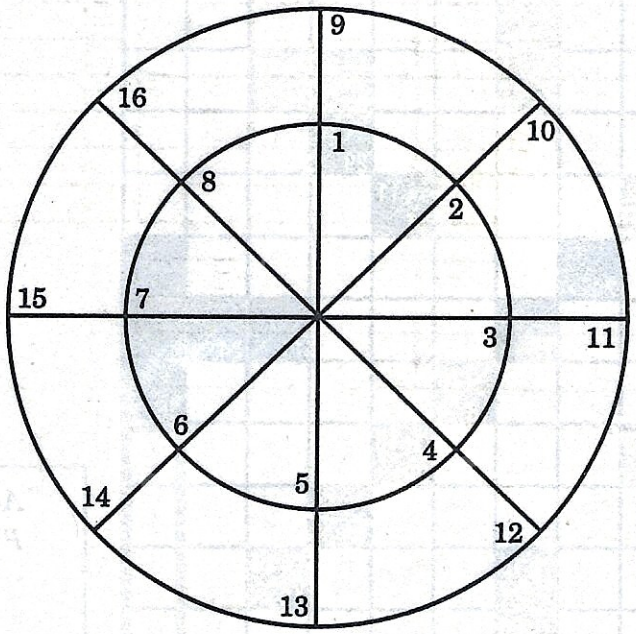
7-1. The first two digits form a number that is divisible by the third digit

9-11. Three consecutive digits in some order

11-13. Three consecutive digits in some order

13-15. Three consecutive digits in some order

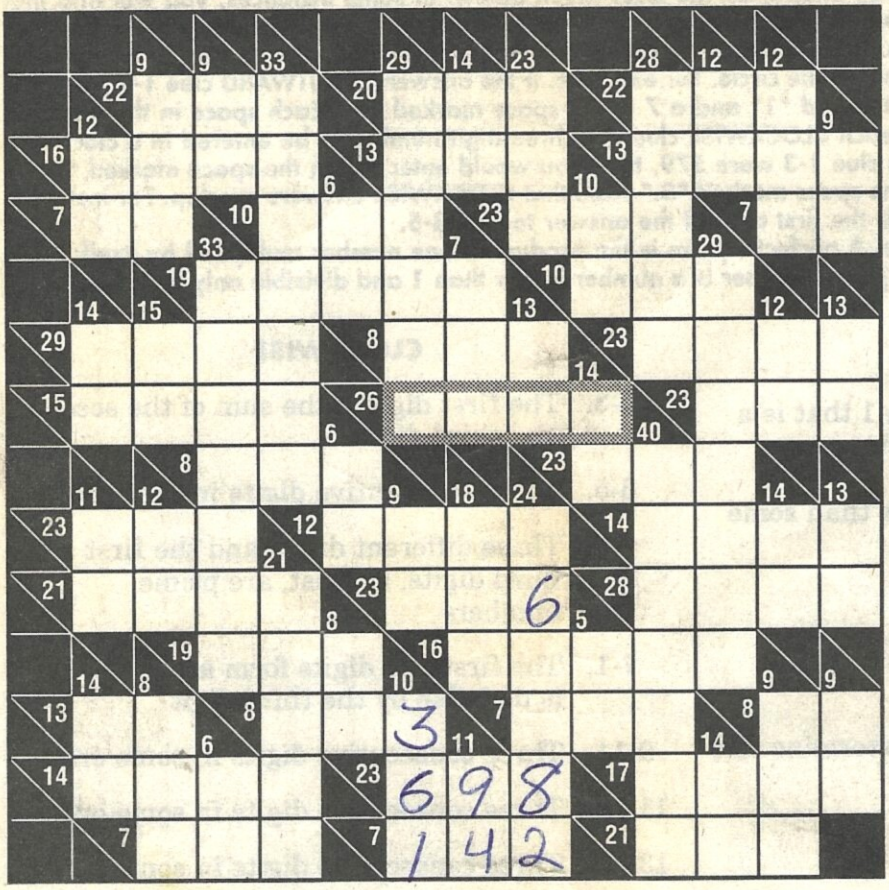
15-9. Three different digits and the second and third digits are each divisible by the first, which is not 1



Solution is on page 60

CROSS SUMS

13.

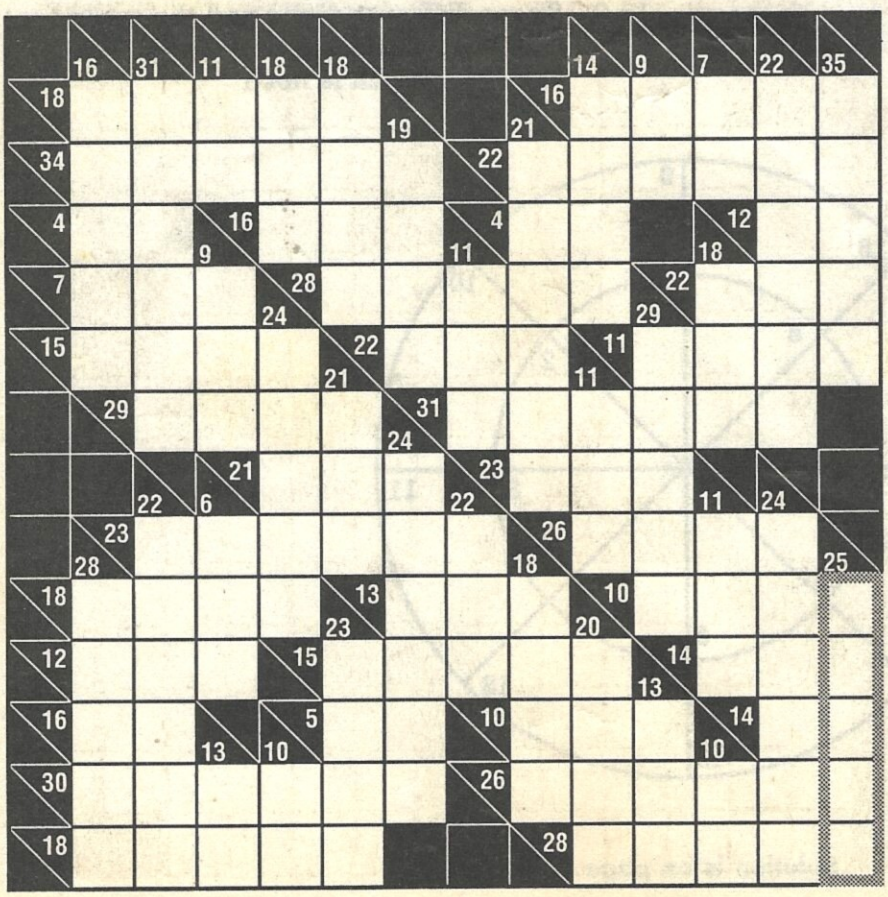


We have outlined one area in each diagram on these two pages. If you need help starting a puzzle, the digit combination to go into that area is listed on page 65.

Solutions are on page 59.

Directions for solving are on page 12.

14.



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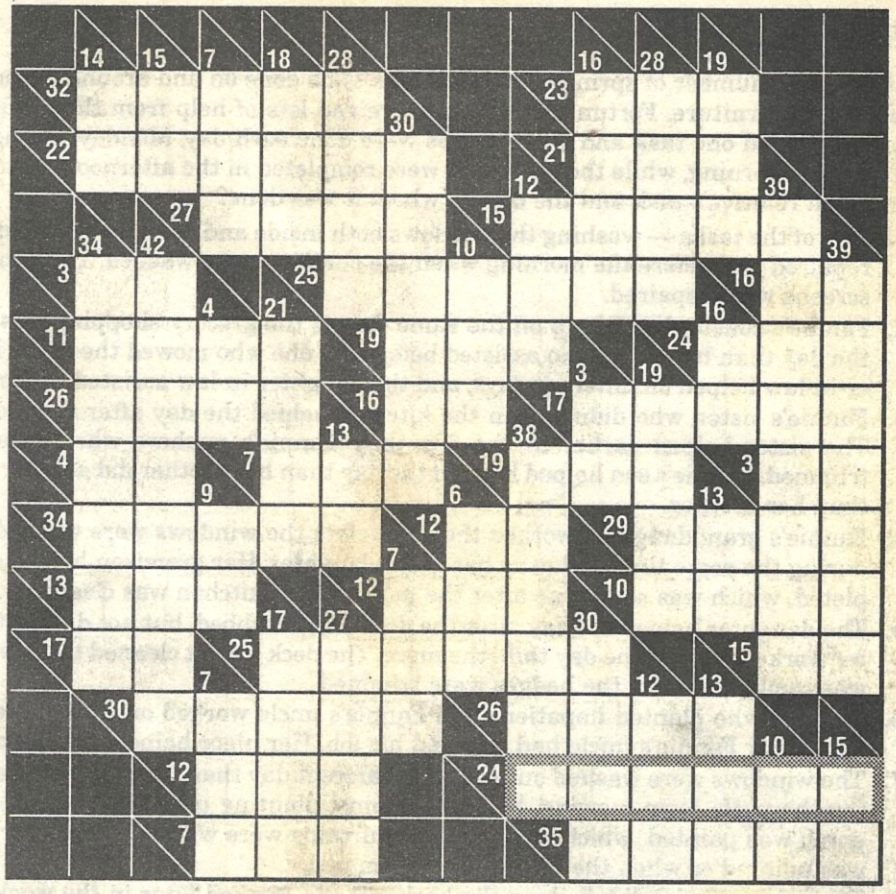
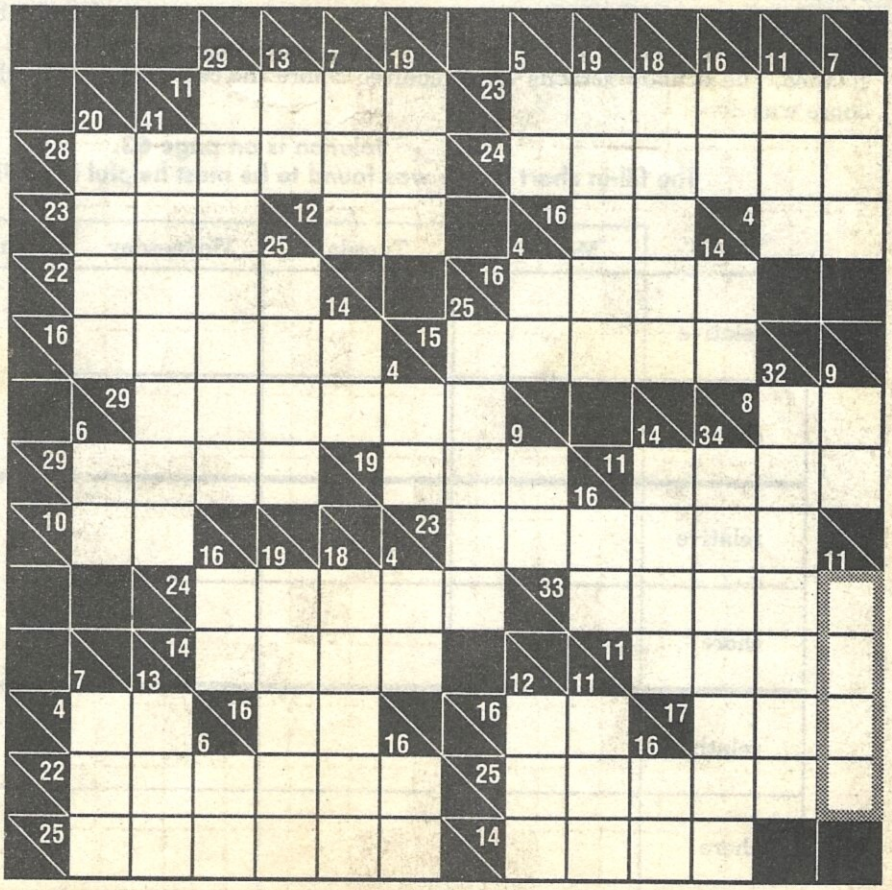
CROSS SUMS

15.

Solutions are on page 59.



16.



LOGIC PROBLEM 10

SPRING CLEANING

by Jean M. Hannagan

There were a number of spring-cleaning chores to be done on and around Fannie's beach house, including cleaning the outdoor furniture. Fortunately, Fannie received lots of help from the family, including her sister-in-law. Each relative tackled one task and three chores were done each day, Monday through Friday. On each day, one job was done in the morning, while the other two were completed in the afternoon. From the following clues, can you determine each relative's task and the day on which it was done?

1. Two of the tasks — washing the windows both inside and outside — were done before the window screens were repaired and before the morning when the curtains were washed. The hedges were trimmed after the window screens were repaired.
2. Fannie's cousin didn't help on the same day as the grocery shopping was done. Her cousin worked earlier in the day than her aunt, who assisted before the one who mowed the lawn. Fannie's daughter-in-law and brother-in-law helped on different days, and the daughter-in-law assisted earlier in the day than the brother-in-law.
3. Fannie's sister, who didn't clean the kitchen, helped the day after the morning when the porch was painted. The sister helped earlier in the day than Fannie's nephew, who helped the day before the hedges were trimmed. Fannie's son helped later in the day than her brother did and her son-in-law worked later in the week than her brother.
4. Fannie's granddaughter worked the day before the windows were washed outside and Fannie's uncle worked during the same time of day as her granddaughter. Her grandson helped after the grocery shopping was completed, which was sometime after the morning the kitchen was cleaned.
5. The daughter helped the day after the deck was scrubbed, but not during the same time of day, and the daughter worked later in the day than the niece. The deck wasn't cleaned the day the herb garden was planted, which was completed after the hedges were trimmed.
6. The one who planted impatiens and Fannie's uncle worked on different days. The planting of impatiens was done after Fannie's uncle had finished his job. Her niece helped the day before her cousin did.
7. The windows were washed outside on a different day than when they were washed inside. No yardwork (weeding the path, lawn mowing, hedge trimming, planting impatiens, and planting herbs) was done the day the porch was painted, which was after the curtains were washed. The deck wasn't washed on the day the porch was painted or when the hedges were trimmed.
8. Fannie's son, who didn't clean the barbecue pit, worked later in the week than her daughter-in-law and during the same time of day. The cousin didn't work on the same day as the barbecue pit was cleaned.
9. The path was weeded, which was done in the morning, and the hedges were trimmed before the deck was cleaned. The window screens were repaired before the curtains were washed and at least a day after another chore was done.

Solution is on page 63.

The fill-in chart below was found to be most helpful in solving this problem.

	Monday	Tuesday	Wednesday	Thursday	Friday
relative					
chore					
relative					
chore					
relative					
chore					

FIGURE LOGIC 6

Directions for solving Figure Logics are on page 9.
If you need help starting this puzzle, a starting help is given on page 65.

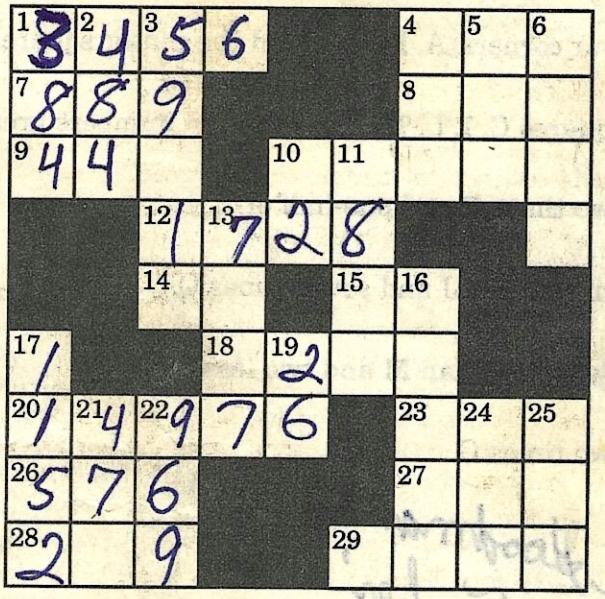
In this Figure Logic, no two answers are the same.

ACROSS

1. Consecutive digits in ascending order
4. Square root of 16-Down
7. 1-Across divided by one of its digits
8. Successive digits of 1-Across
9. 2-Down minus 14-Across
10. 27-Across times the sum of 10-Down plus 19-Down
12. Factor of 1-Across
14. 23-Across divided by the sum of 10-Down plus 19-Down
15. Multiple of 19-Down
18. Number formed by the first two digits minus the number formed by the last two digits is 15-Across
20. 26-Across times 19-Down
23. 26-Across rearranged
26. Same definition as 7-Across
27. 13-Down divided by 14-Across
28. 16-Down divided by 15-Across
29. 1-Across plus 17-Down

DOWN

1. This times one of its digits is 17-Down
2. A palindrome
3. Consecutive digits not in order
4. Quotient of four times 13-Down divided by three times 15-Across
5. Square of 14-Across
6. 3-Down divided by 10-Down
10. 19-Down divided by one of its digits
11. Product of its digits is 4-Down minus 14-Across
13. 12-Across rearranged
16. 12-Across times 10-Down
17. Same definition as 7-Across
19. Square root of 26-Across
21. Factor of 23-Across
22. A palindrome
24. 26-Across minus the sum of 10-Down plus 19-Down
25. One digit is the sum of the others



Solution is on page 60

NUMBER PLACE

Turn to page 17 for directions on solving Number Place.

Solutions are on page 60.

7.

8	2	5	7			3	4	6
6	1	3	2	8	4	5	9	7
4	7	9	5	3	6	2	8	1
1	6	8	4	2	9		7	5
		2		5	7			3
9	5		6		3	8	2	4
		6			2	7	1	9
7	3	1		6		4	5	2
2		4	1	7		6	3	8

8.

	3			2		9		
6			9				7	
		4			7			1
2			6					3
	5			8		6		
		9	2		3		1	
9				5	6	8		
	2	6					5	
	4		7	3				6

9.

8			2				7	
	9				7			2
		6		5		3		
		3		6			5	
6					4	8		
	1		8					9
2			4			1		
		9		1				7
	7				8		9	

SQUARE LOGIC

by Linda Thistle

Each letter in the diagram below stands for a number from 1 through 25. Using the eight clues, can you deduce the number represented by each letter? As you will see from clue 2, when all the numbers have been correctly entered into the diagram, it will be a Magic Number Square. As each number from 1 through 25 is used only once (clue 1), you will find it helpful to cross out each number as you place it in the diagram. **Solution is on page 61.**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

CLUES

1. Only the whole numbers from 1 to 25 are used and each number is used only once.
2. The five numbers in each row across, each column down, and each of the two diagonals add up to 65.
3. The four corners, A, E, U, Y, and the center square, M, also add up to 65.
4. The squares C, I, L, T, and U contain numbers greater than 20.
5. A is two times P and one-half of T.
6. C is three times J and seven times Q.
7. G is two more than M and two less than O.
8. L is two times G.

Sandra Hoodman
Not For Teacher
Not For The Birds
JCC Records

A	B	C 21	D	E
F	G	H	I	J 7
K	L	M	N	O
P	Q 1	R	S	T
U	V	W	X	Y

LOGIC PROBLEM 11

THE TRADING MARKET

by David Champlin

On a recent Saturday, six people went to MacKenzie's Trading Market to exchange sporting goods they no longer needed for kitchen articles. Each customer bartered his or her item with a different MacKenzie sibling. From the following clues, can you determine each customer's full name (one last name is Chasen), item he or she traded, the MacKenzie sibling he or she traded with, article received in exchange, and the order in which the customers arrived at MacKenzie's?

1. Willie arrived immediately before the person who wanted to trade an archery set, who arrived immediately before the person who received coffee mugs in exchange for his or her item. The customer who traded with Zack MacKenzie arrived before, but not immediately before, Maglie. (Note: Five customers are referred to in this clue.)
2. Fein arrived before the customer who traded for steak knives and there were as many customers between these two as there were between Rick MacKenzie's customer and Viola, who arrived after Rick's customer. (Note: Four customers are referred to here.)
3. Neither the one who exchanged the basketball nor the one who traded the bowling ball received the casseroles in exchange. The person who traded the basketball did not arrive second.
4. Underwood arrived immediately before the customer who traded with Beth MacKenzie, who arrived immediately before Seth. The customer who received the tea set arrived before, but not immediately before, the customer who wanted to exchange the tennis racket. (Note: Five customers are referred to in this clue.)
5. Neither Keith, who didn't receive the toaster, nor Willie, who didn't trade with Rick MacKenzie, exchanged the set of pool cues, which wasn't what Maglie wanted to exchange.
6. The six customers were Fawn, Weathers, the one who exchanged the set of golf clubs, the one who traded with Dina MacKenzie, the one who traded for the coffeepot (who wasn't the last customer to arrive), and the first customer to arrive.
7. Islin did not trade with Beth MacKenzie.
8. Marie MacKenzie's customer, who did not arrive third, did not trade for the toaster or tea set. The one who traded for the tea set did not exchange the basketball.
9. The customer who traded the bowling ball arrived immediately before Pearl, who arrived immediately before Islin. The one who traded for the toaster arrived before, but not immediately before, Nick MacKenzie's customer. (Note: Five customers are referred to in this clue.)
10. Pearl is not Weathers.

Solution is on page 64.

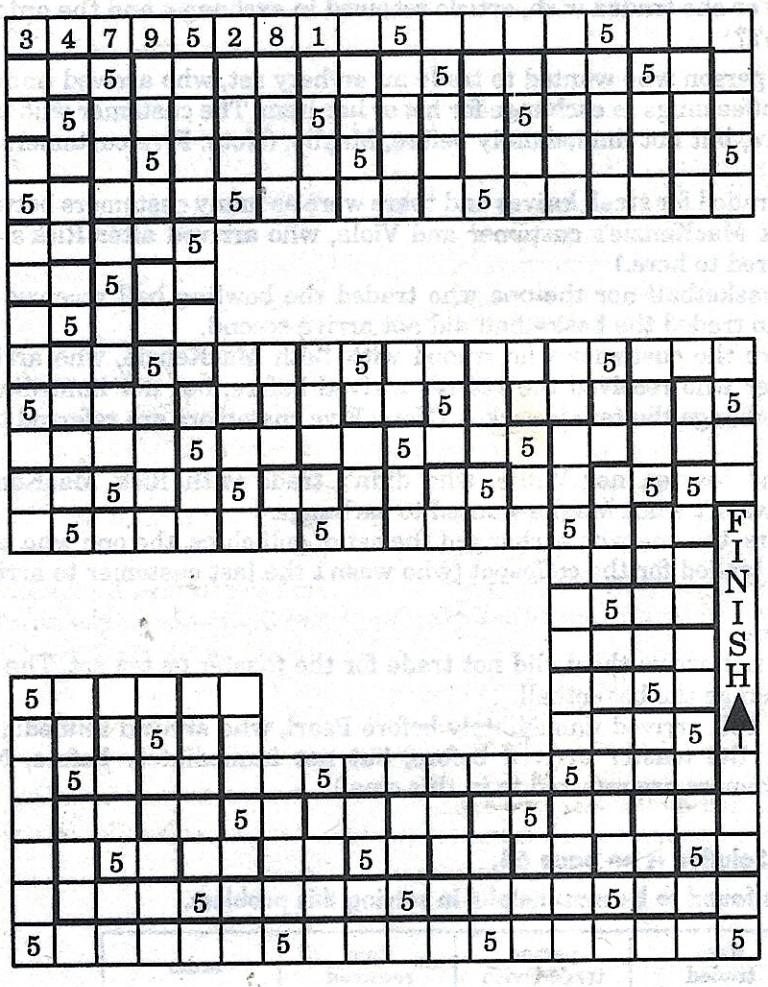
The fill-in chart below was found to be most helpful in solving this problem.

first name	last name	item traded	person traded with	item received	order

FIVE BY FIVE

Starting at the top-left corner, see if you can wend your way to Finish by entering the given numbers into the diagram in a continuous chain; that is, the last digit of each entry is the first digit of the next. The correct route through the diagram is marked by heavy lines. All of the 5s have been entered for you, as has the first number in the chain.

Solution is on page 60.



00728566
05401285
05879357
06345821
10253864
13506395
13657147
17125609
17495932
20578234
20795206
25725277
28056048
28115703
32278164
~~34795281~~
35226815
41394958
41685343
42940586
45389259
48573095
53345929
54167053
54172751
54617450
56012591
59684152
61805317
61839674
63051695
63615162
67500592
72915428
75768290
75980458
76859386
82403056
83056635
86051779
89567122
94536031
95237750
96590170
97165884

THE RIGHT FIT

Place the blocks of numbers into the diagram so that the numbers reading across are the same numbers reading down, in order (that is, the numbers in the top row are also in the first column, the numbers in the second row are also in the second column, etc.). Do not rotate the blocks of numbers.

Solution is on page 60.

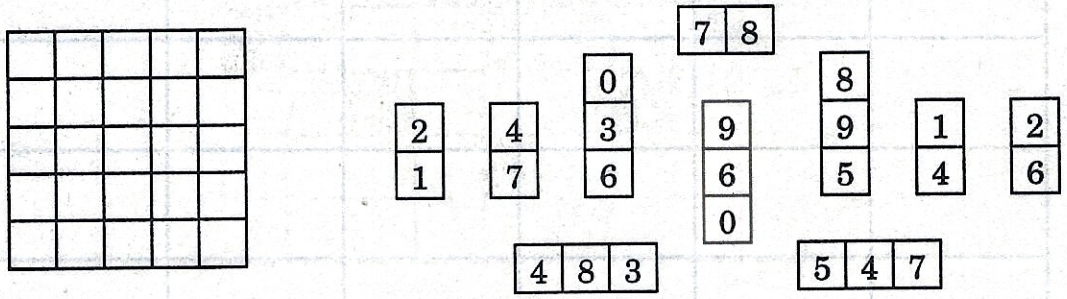


FIGURE LOGIC 7

Directions for solving Figure Logics are on page 9.
If you need help starting this puzzle, a starting help is given on page 65.

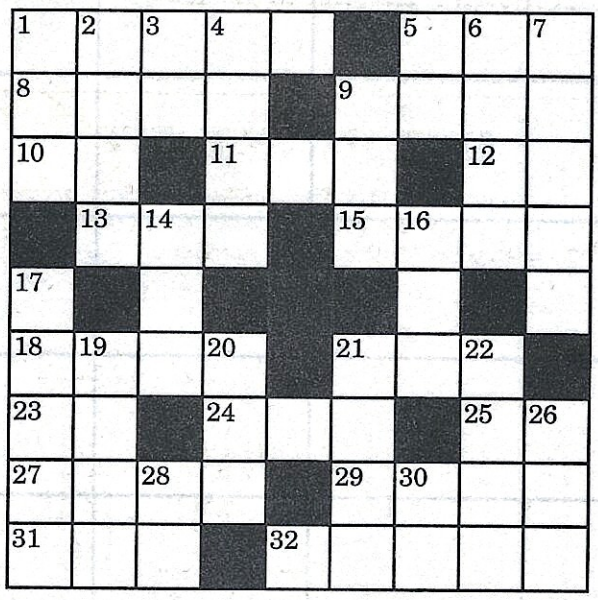
In this Figure Logic, * represents a number with alternate digits that are the same, with the sum of the first, third, and fifth digits equaling the sum of the second and fourth digits. For example, 23232 could be a * number.

ACROSS

1. *
5. One digit is the sum of the others
8. 21-Down times one of its digits
9. Number formed by the first two digits plus the last digit is the square root of 31-Across
10. A multiple of the sum of its digits
11. 7-Down divided by 5-Across
12. Square root of 1-Down
13. 28-Down plus the quotient of 15-Across divided by 5-Down
15. Number formed by the first two digits plus the number formed by the last two digits is 12-Across plus 25-Across
18. Difference between 5-Across and 23-Across times the sum of 10-Across and 23-Across
21. 32-Across divided by 31-Across
23. Successive digits of 1-Across
24. 10-Across times the reverse of 3-Down
25. Square root of 21-Down
27. Number formed by the first two digits is the product of the last two digits
29. The sum of the number formed by the first two digits and the number formed by the last two digits divided by the last digit of that sum is 25-Across
31. See 21-Across
32. *

DOWN

1. A palindrome
2. Number formed by the first two digits plus the number formed by the last two digits is 21-Across
3. 28-Down minus the sum of 12-Across plus 25-Across
4. Number formed by the first two digits minus the number formed by the last two digits is the average of 10-Across and 3-Down
5. Square root of 21-Across
6. 9-Across rearranged
7. *
9. Square root of 32-Across
14. 9-Across divided by one of its digits
16. 14-Down minus 13-Across
17. 14-Down times the cube of 17-Down's last digit
19. 21-Across times the quotient of 16-Down divided by the sum of its digits
20. 29-Across divided by 25-Across
21. 32-Across divided by 23-Across
22. Number formed by the last two digits minus the number formed by the first two digits is 30-Down
26. 5-Across times one of its digits
28. 1-Across divided by 1-Down
30. 5-Across divided by one of its digits



Solution is on page 60

LOGIC PROBLEM 12

FIVE FAMILIES

by Kathleen JoAnn

Four of the five houses on Sycamore Lane were recently sold. The four families who moved into those houses traveled a different number of miles from where they originally lived. The fifth house is occupied by a family who has never moved. Each of the five families consists of a husband, wife, daughter, and son. Each wife shares her husband's name. From this information and the following clues, can you determine each family member's full name, the number of miles each moving family traveled, and which family never moved?

1. For each group of family members (wives, husbands, daughters, and sons), no two names start with the same letter. No two first names of members in a family start with the same letter and no last name of a family starts with the same letter of the first names of that family.
2. The five wives are Dave's wife (who traveled 500 miles), Ms. Erskine, Naomi's mother (who did not travel the farthest), Tim's mother, and Yvonne.
3. The Yancys traveled three times farther than did Teresa.
4. Deirdre traveled twice as many miles as Yul traveled and 800 miles less than Dylan, who is not Yvonne's son.
5. Yvette, a daughter, is not related to Tabitha, a wife.
6. Three of the husbands are Eli, Ted, and Zachary. Three of the sons are Eliot, Neil, and Yves. Two of the daughters are Deborah and Elizabeth. Nancy and Zelda are two of the wives. Three of the surnames are Donner, Nolan, and Zane.
7. The four families that moved each traveled a whole number of miles.

Solution is on page 64.

The fill-in chart below was found to be most helpful in solving this problem.

last name	wife	husband	daughter	son	miles traveled

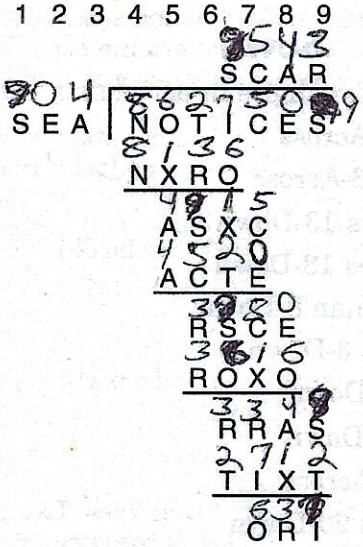
WORD ARITHMETIC

See page 10 for solving directions.

Answers are on page 65.

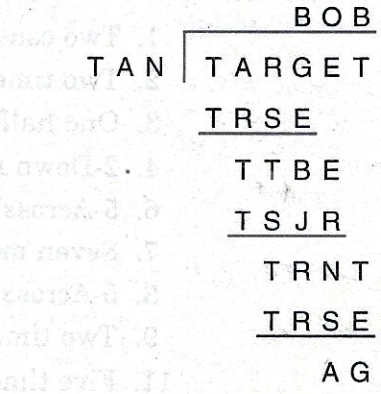
37. EXTRACOINS

0 1 2 3 4 5 6 7 8 9



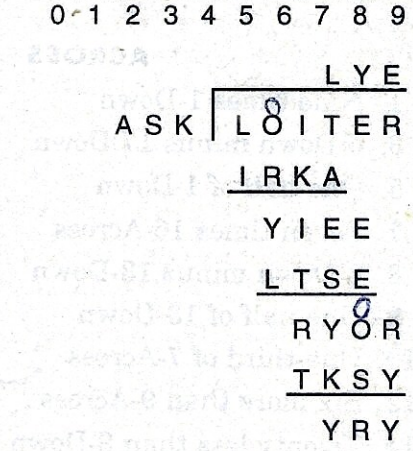
38.

0 1 2 3 4 5 6 7 8 9



39. O

0 1 2 3 4 5 6 7 8 9



40. QUITEMANLY

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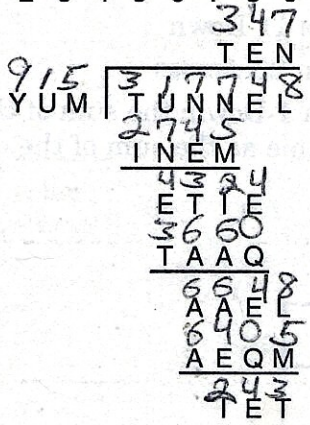
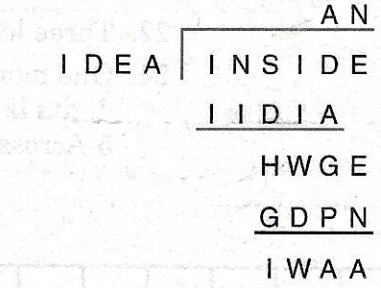


41.

0 1 2 3 4 5 6 7 8 9



42. L

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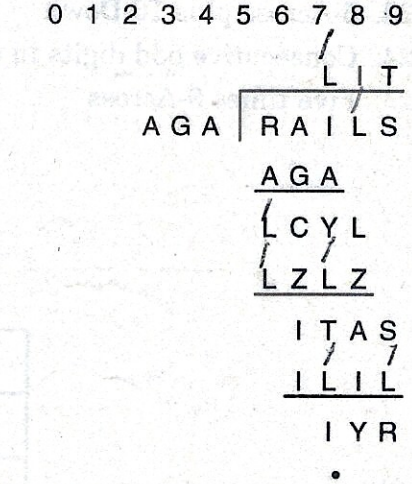
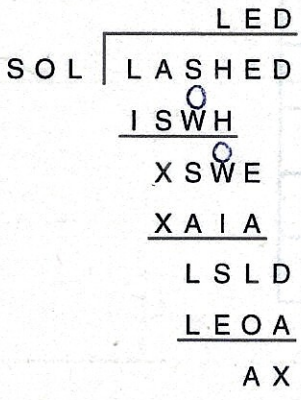


43. W

0 1 2 3 4 5 6 7 8 9



44. OURPENCILS

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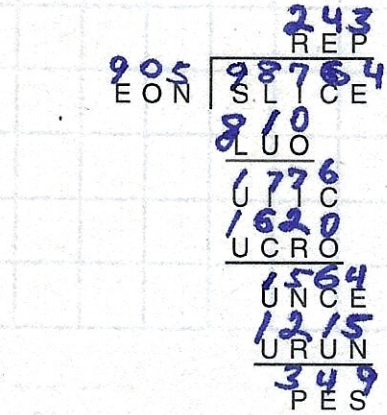


45.

0 1 2 3 4 5 6 7 8 9

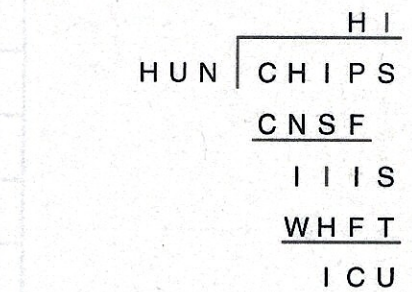


FIGURE LOGIC 8

by Linda Thistle

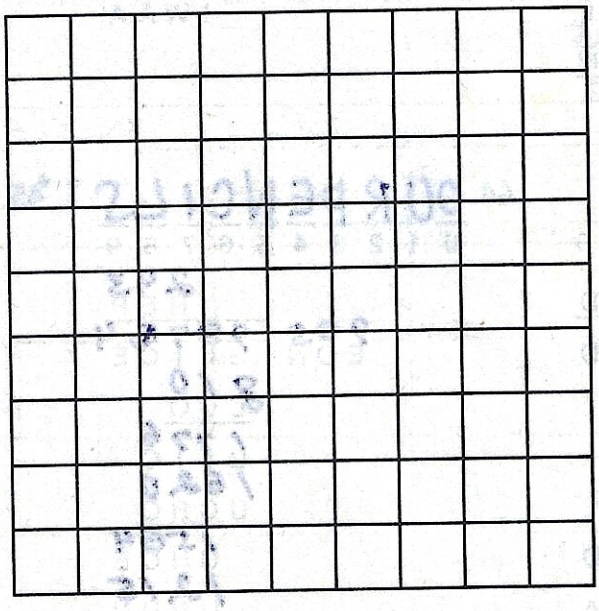
Directions for solving Figure Logics are on page 9. This puzzle is a diagramless, so you will have to enter the black squares as well as the numbers into the diagram as you solve. Remember that the diagram is symmetrical from the top-left corner to the bottom-right corner; therefore, when you decide the location of one black square, you can enter its counterpart. If you need help starting this puzzle, a starting help is given on page 65.

ACROSS

1. Nine times 1-Down
3. 6-Down minus 17-Down
5. One-half of 1-Down
7. Seven times 16-Across
8. 6-Down minus 13-Down
9. One-half of 13-Down
10. One-third of 7-Across
12. Six more than 9-Across
14. Twenty less than 8-Down
16. One-third of 1-Across
18. 16-Down plus 22-Down
19. 25-Across minus 16-Across
21. 9-Down minus 24-Across
23. 5-Across plus 16-Down
24. Consecutive odd digits in ascending order
25. Five times 9-Across

DOWN

1. Two consecutive digits in ascending order
2. Two times 1-Across
3. One-half of 16-Across
4. 2-Down minus 13-Down
6. 5-Across times 18-Down
7. Seven more than 8-Down
8. 5-Across plus 3-Down
9. Two times 4-Down
11. Five times 8-Down
13. Ten times 5-Across
15. 8-Across plus 20-Down
16. One-seventh of 12-Across
17. Five times 3-Down
18. One less than 14-Across
20. 3-Across minus 11-Down
22. Three less than 23-Across
24. One more than 1-Down; the sum of the digits is the same as the sum of the digits of 5-Across



Solution is on page 60

LOGIC PROBLEM 13

THE PICNIC

by David Champlin

Six friends recently met for a spring picnic. Since it was still a bit nippy out, each wore a sweat shirt and a different kind of hat. The sweat shirts and hats were all different colors. The friends arrived at the picnic at different times and each brought a different food. From the following clues, can you determine each person's hat and its color, sweat-shirt color, food, and the order in which they arrived?

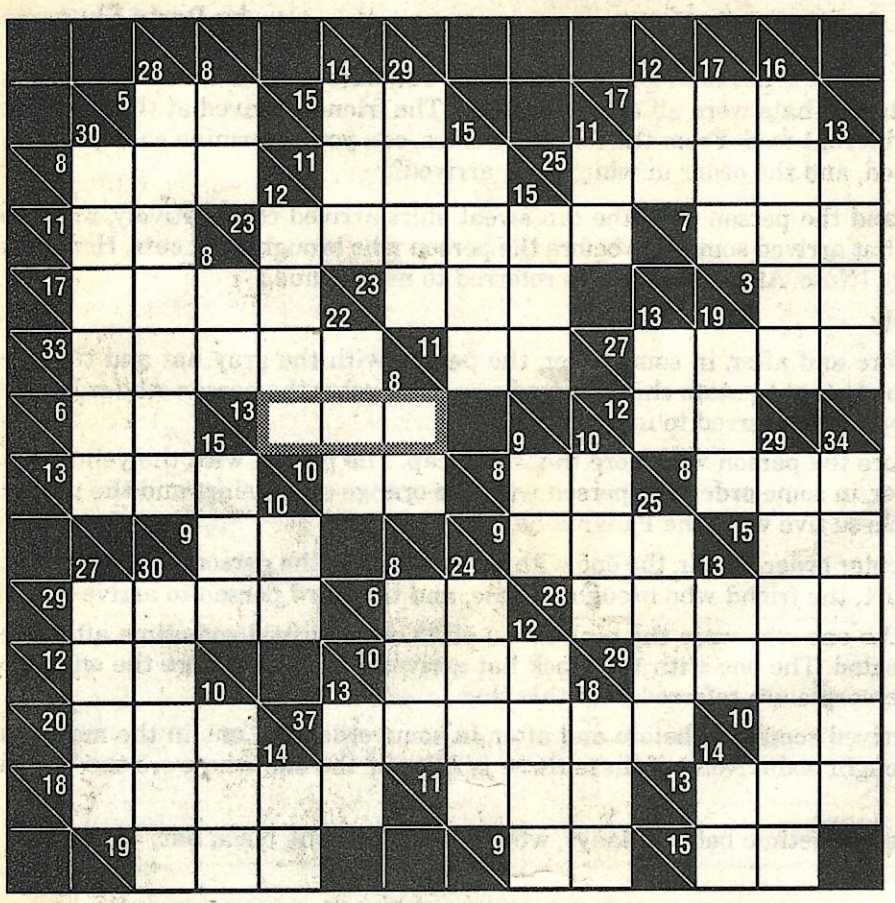
1. The person with the white hat and the person with the tan sweat shirt arrived consecutively, in some order. The one with the Panama hat arrived sometime before the person who brought cold cuts. Herb and Alice did not arrive consecutively. (Note: All six friends are referred to in this clue.)
2. No two men arrived consecutively.
3. Gladys arrived immediately before and after, in some order, the person with the gray hat and the one with the cowboy hat. The one who brought potato chips arrived sometime after the person who wore the blue sweat shirt. (Note: Five people are referred to in this clue.)
4. George arrived immediately before the person who wore the watch cap. The person with the yellow hat arrived sometime before and after, in some order, the person with the orange sweat shirt and the person who brought cole slaw. None of these five wore the Panama hat.
5. The six friends were, in no particular order, Edgar, the one with the brown hat, the person with the beret, the one with the green sweat shirt, the friend who brought cheese, and the third person to arrive.
6. Angela arrived sometime after the one who wore the pink sweat shirt, who arrived sometime after the one who brought the macaroni salad. The one with the black hat arrived sometime before the one who had the baseball cap. (Note: Five people are referred to in this clue.)
7. The one who wore the fedora arrived sometime before and after, in some order, the one in the magenta sweat shirt and the one who brought soda. None of these three is Alice or the one who wore the brown hat.
8. The man with the red hat arrived sometime before Gladys, who did not wear the black hat.
9. Alice wasn't the first to arrive.
10. Neither Herb nor the one with the gray hat had on the fedora.
11. The one with the white hat wasn't wearing the beret.
12. George didn't have on the cowboy hat and Angela wasn't wearing the Panama hat.

Solution is on page 64.

The fill-in chart below was found to be most helpful in solving this problem.

	1st	2nd	3rd	4th	5th	6th
name						
hat						
hat color						
sweat-shirt color						
food						

CROSS SUMS

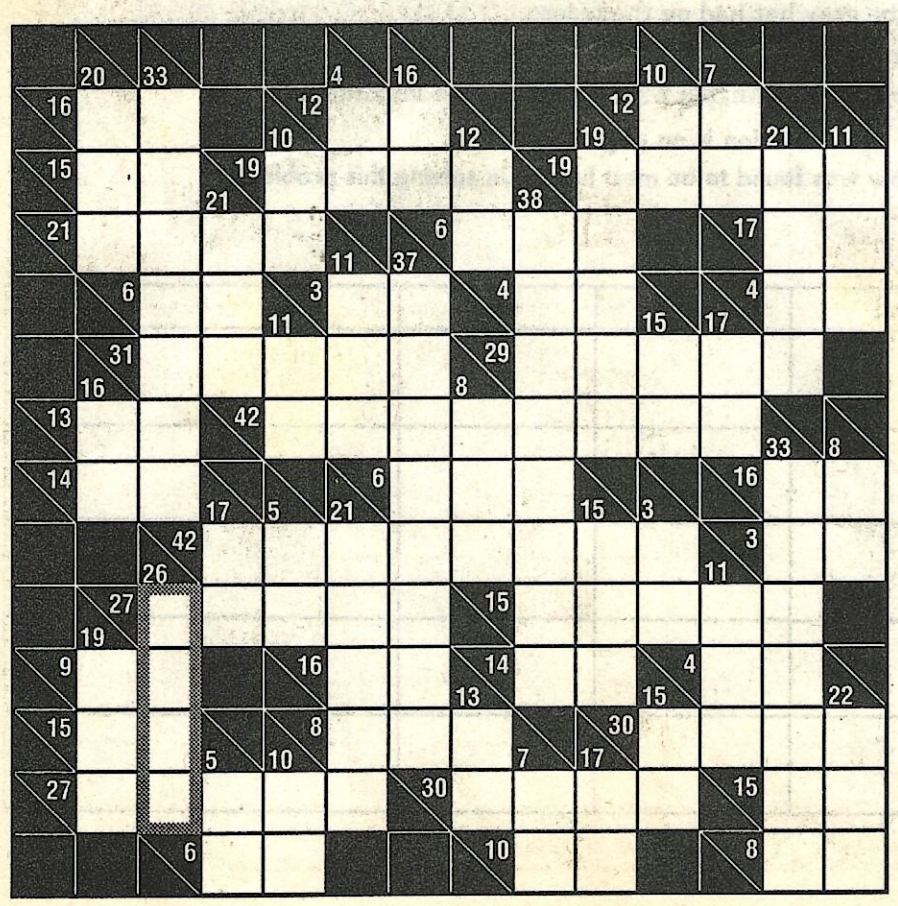


17.

We have outlined one area in each diagram on these two pages. If you need help starting a puzzle, the digit combination to go into that area is listed on page 65.

Solutions are on page 59.

Directions for solving are on page 12.



18.

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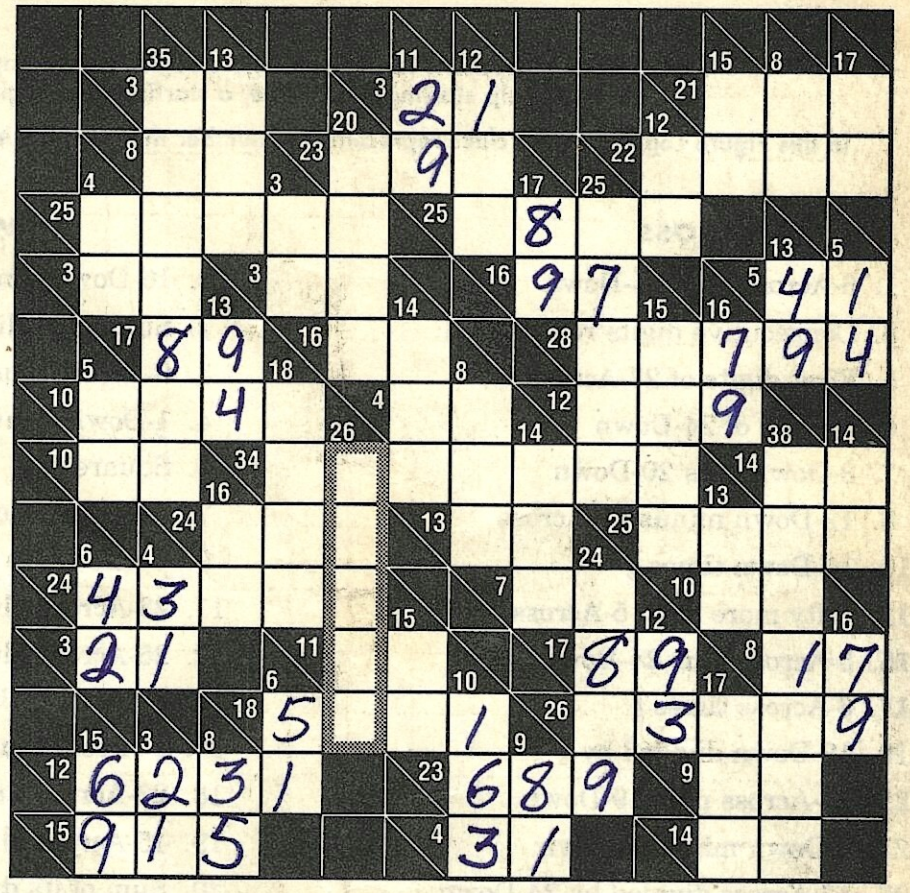
CROSS SUMS

19.

Solutions are on page 59.



20.

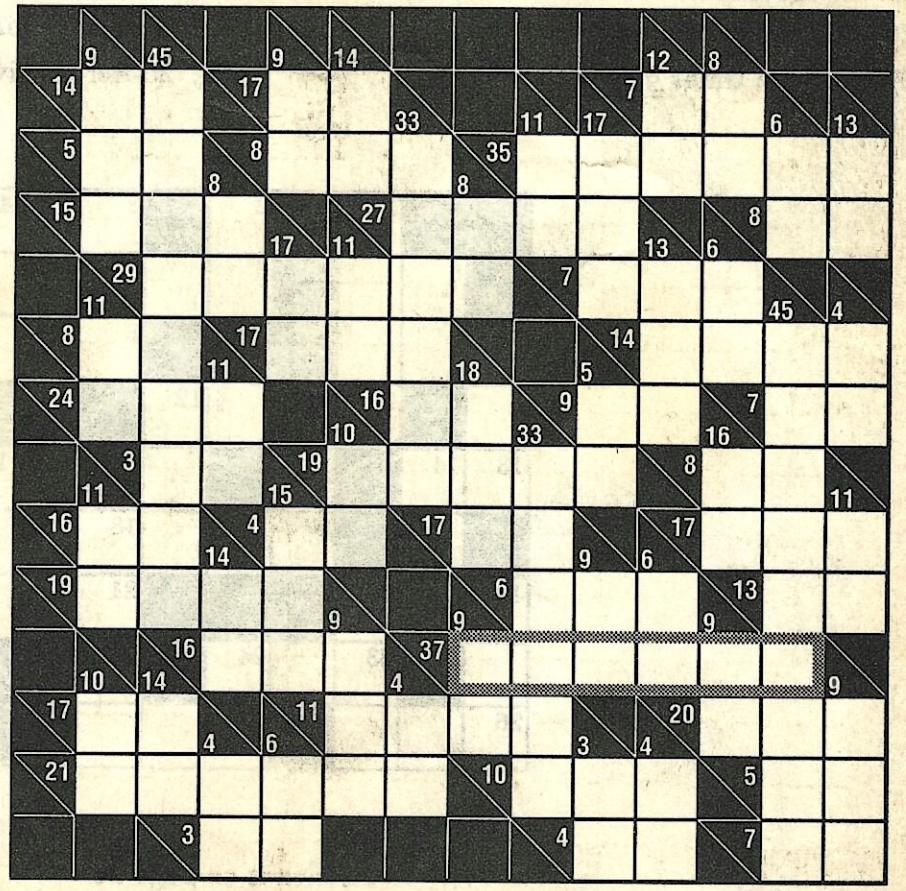


FIGURE LOGIC 9

by Linda Thistle

CHALLENGER

Directions for solving Figure Logics are on page 9.
If you need help starting this puzzle, a starting help is given on page 65.

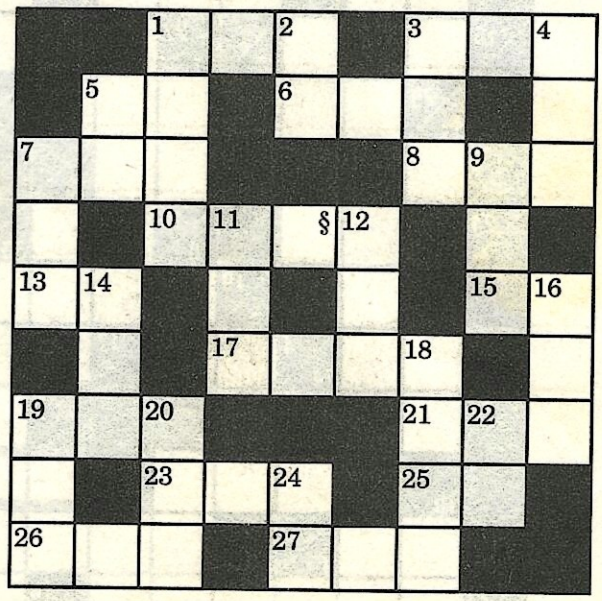
In this Figure Logic, § in the clues represents the number that belongs in the indicated box in the grid.

ACROSS

1. 6-Across plus 14-Down
3. Consecutive digits rearranged
5. First digits of 27-Across
6. Square of 24-Down
7. 3-Down plus 20-Down
8. 12-Down minus 23-Across
10. 11-Down times §
13. Fifty more than 5-Across
15. 5-Across plus 24-Down
17. 6-Across times §
19. 12-Down divided by §
21. 27-Across plus 19-Down
23. 4-Down minus 9-Down
25. 17-Across divided by 24-Down
26. 7-Down minus 4-Down
27. 2-Down times §

DOWN

1. 16-Down times §
2. Sum of its digits is §
3. 8-Across plus 27-Across
4. 1-Down minus 10-Across
5. Square of §
7. 7-Across minus §
9. Consecutive odd digits rearranged
11. 23-Across plus 20-Down plus §
12. 25-Across plus 16-Down
14. Product of the digits of 3-Across
16. 1-Across plus 26-Across
18. 23-Across times §
19. 15-Across plus 15-Across
20. Sum of its digits is §
22. Sixty less than 25-Across
24. 25-Across divided by §



Solution is on page 60

FIGURE LOGIC 10

CHALLENGER

by Linda Thistle

Directions for solving Figure Logics are on page 9.
If you need help starting this puzzle, a starting help is given on page 65.

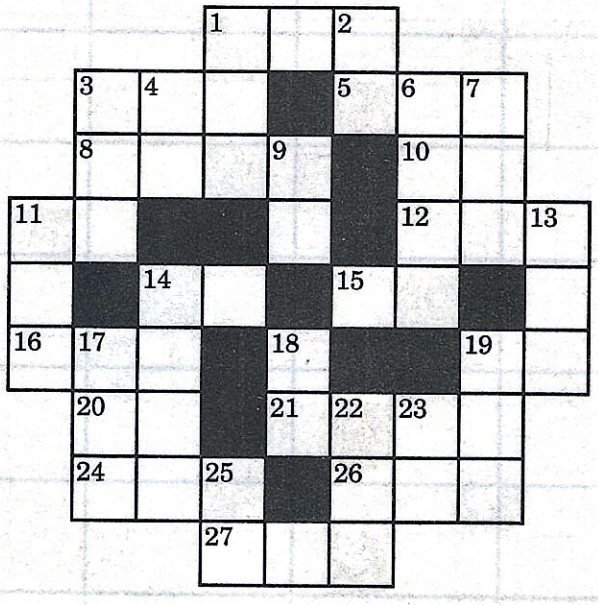
In this Figure Logic, each letter used in the puzzle represents a different number from 1 to 9. Also, no two answer entries in the diagram are the same.

ACROSS

1. 14-Across times 4-Down
3. Consecutive digits rearranged
5. 1-Across divided by I
8. Consecutive digits rearranged
10. 15-Across minus M
11. 9-Down plus T
12. 16-Across minus U
14. Digits of 19-Across reversed
15. 18-Down minus R
16. 27-Across plus 19-Down
19. Consecutive digits in ascending order
20. 4-Down times I
21. 16-Across times A
24. 3-Across plus A
26. 3-Down plus H
27. 18-Down times 25-Down

DOWN

1. Three different multiples of three
2. 19-Across minus I
3. Ten times 15-Across
4. 10-Across minus U
6. 22-Down times I
7. 12-Across minus 26-Across
9. 13-Down divided by U
11. 19-Down minus L
13. 1-Down divided by P
14. 1-Down times H
17. 24-Across times R
18. 9-Down minus 25-Down
19. 8-Across divided by L
22. 19-Across times 25-Down
23. 14-Across minus T
25. 14-Across divided by M



Solution is on page 60

LOGIC PROBLEM 14

ENTRANCE EXAMS

by Kevyn Dymond

The entrance exams for State University is comprised of three separate sections — English, math, and science. For each section, a student can receive a score of 1 through 5 so that the overall score can range from a minimum of 3 (1 + 1 + 1) to 15 (5 + 5 + 5). Recently, Shawn and six other high-school seniors took the exams. From the clues below, can you determine each student's full name (one last name is Harmon), English score, math score, science score, and total score?

1. No two students received the same point total.
2. No student received the same score for any two sections.
3. Garcia's total was one point higher than Terry's.
4. Terry and Garcia each scored 3 on the same section, which wasn't science.
5. The total for Chris was two more than the total for Maddox, who scored 1 on one section.
6. Lister, who isn't Robin, scored an odd number of points on the math section.
7. Nesbit's total was more than Kelly's total.
8. Dusty and Barker both scored the same number of points on the English section. At least three students received this same number of points on the math section.
9. Dusty, who scored 4 on the math section, had a total that was one point higher than Barker's.
10. Jamie and Farmer received, in some order, the lowest and highest totals.
11. Each scoring possibility (1, 2, 3, 4, or 5) was achieved at least once in each section.

Solution is on page 61.

The fill-in chart below was found to be most helpful in solving this problem.

first name	last name	English	math	science	total

LOGIC PROBLEM 15

THE WOOLEY QUILT

by Kevyn Dymond

Lisa Wooley made a rectangular quilt by fastening together 15 squares of her stitchwork. The entire quilt was made using six different colors, with each square containing four of the six colors. No two squares have the same four colors. From the following clues, can you determine which four colors are in each of the 15 squares?

1. Row B has more squares containing blue than row C and fewer squares containing blue than row A.
2. At least one row contains no yellow in its farthest left square and no orange in its farthest right square.
3. No corner square contains violet.
4. At least one of the columns contains no green.
5. Either squares C-4 and C-5 contain no blue or they contain no red.
6. Squares B-2, B-3, and B-4 all have orange.
7. Squares A-3 and B-1 have exactly two colors in common.
8. Square B-3 contains green and yellow.
9. Row C has more squares containing red than row A and fewer squares containing red than row B.

Solution is on page 61.

The fill-in chart below was found to be most helpful in solving this problem.

	column 1	column 2	column 3	column 4	column 5
row A					
row B					
row C					

NUMBER PLACE CHALLENGER

by Walter Mackey

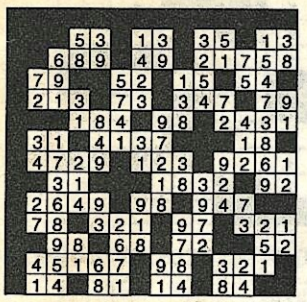
Place a number into every box so that each row across, each column down, each small 16-box square, and each of the two long diagonals (circled) will contain each number from 1 to 16. No number may appear more than once in any row across, in any column down, on either diagonal, or within any small 16-box square.

Solution is on page 61.

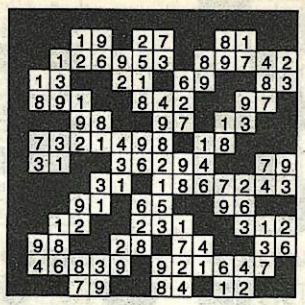
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

◯		1				6	8	9		4		15	10		◯
16	◯		9	7			3	15	12	2		13		◯	
	2	◯			16					11	10		◯		9
3	6		◯	5		12		14				◯	2	11	7
6	15		8	◯	1	9	2		3		◯		5		4
		5	7	12	◯		10	8		◯	1	2		9	
10		14		11		◯		2	◯	16			3		15
	11				15	14	◯	◯		13	5			8	
	1		14			15	◯	◯	16		7	9		2	11
		10	13		7	◯			◯	12		1		5	
15		4		9	◯		14	5		◯	2		13		
11	7			◯	4		1		8	9	◯	12			6
	8		◯		14		11	10			12	◯	6	1	
	13	◯	3	6	2					5			◯	4	
2	◯		15			3		16	4				7	◯	14
◯		12		4		13			7		9	16			◯

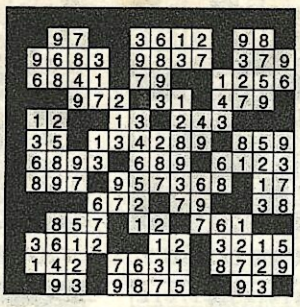
CROSS SUMS 1



CROSS SUMS 2



CROSS SUMS 3



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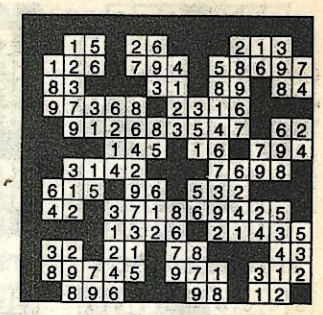
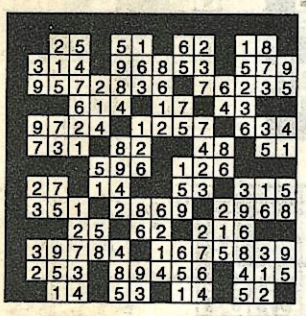
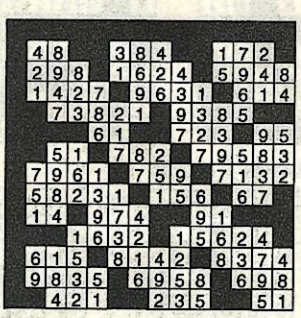


CROSS SUMS 5



CROSS SUMS 6



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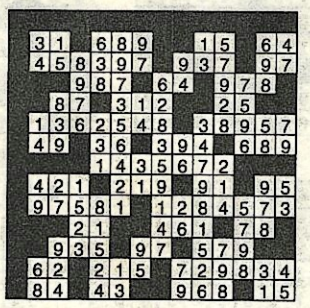
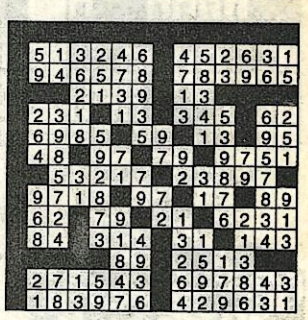
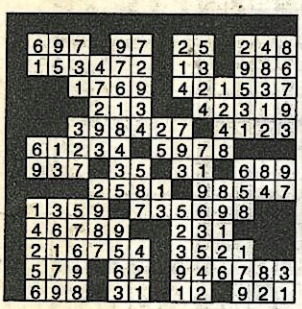


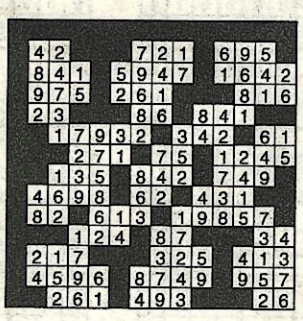
CROSS SUMS 8



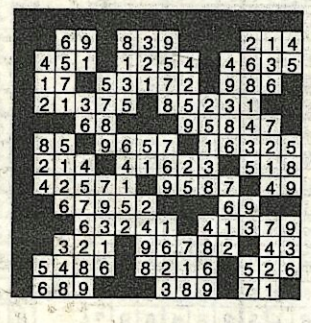
CROSS SUMS 9



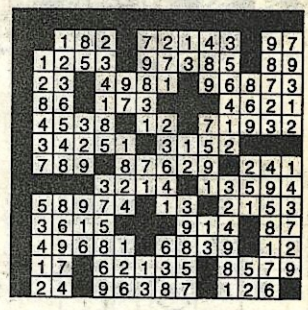
CROSS SUMS 10



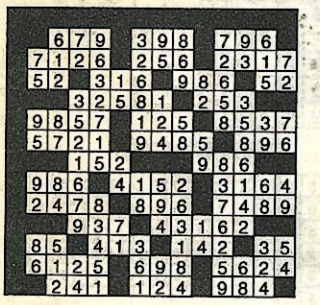
CROSS SUMS 11



CROSS SUMS 12



CROSS SUMS 13



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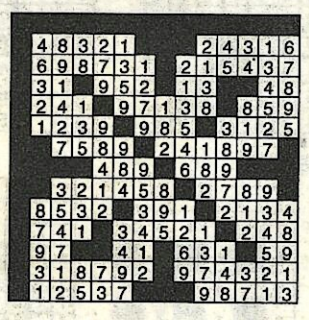

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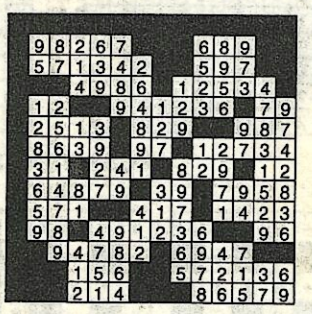

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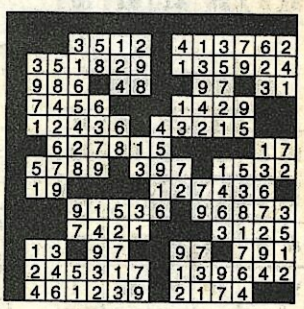
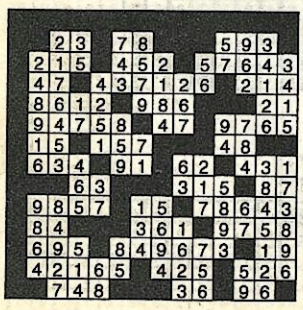


CROSS SUMS 17



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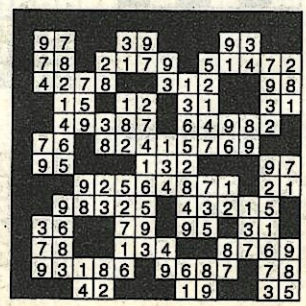

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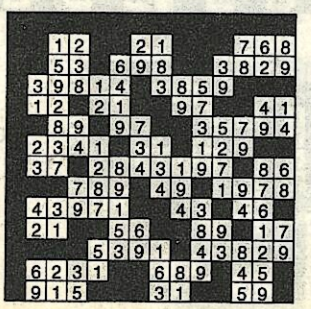


CROSS SUMS 20

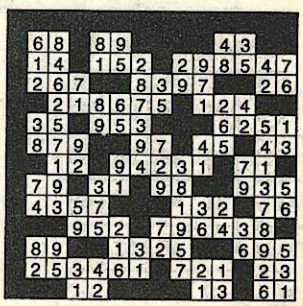


FIGURE LOGIC 1

	4	7	3		1	4	3
2	1	5				8	1	5
5	3	2	4		1	5	2	3
6		3	4	5	1	2		1
			8	3	5			
6		1	1	2	0	4		5
4	8	5	6		4	8	5	1
5	7	9				1	4	2
	5	3	9		2	2	2	

FIGURE LOGIC 2

		8	5	3		2	2	
	4	5	6	7		6	3	9
7	2	6			6	2	4	0
2	1		2	4	2	8		
9	7	1	2		9	6	1	5
		3	2	0	5		1	4
1	1	5	2			3	6	0
9	8	7		3	4	5	6	
	6	3		1	2	7		

FIGURE LOGIC 3

	5	8	9		7	2	
	2	3	0		7	0	8	1
4	8		5	6	7		1	8
2	1	6		0		1	5	6
		9	7		3	1		
3	6	0		7		4	5	1
2	3		2	3	4		3	0
5	0	8	1		5	9	0	
		1	1		6	2	1	

FIGURE LOGIC 5

2	17	5			3	3
4	2	86		9	9	21
		4	2	43		
1	3		3	8	5	
2	30		4		9	15
	7	2	5		4	6
		4	6	28		
5	62	2		1	6	7
13	4			1	6	21

FIGURE LOGIC 6

3	4	5	6			1	4	4
8	6	4				3	4	5
4	4	3		1	2	3	1	2
		1	7	2	8			6
		2	1		7	2		
1			8	2	1	0		
1	3	8	2	4		7	5	6
5	7	6				3	4	2
2	8	8			4	6	0	8

FIGURE LOGIC 7

4	6	4	6	4		1	3	2
8	7	1	2		2	1	0	3
4	5		1	7	6		2	2
	4	7	9		4	2	1	3
8		0			2		2	
7	4	1	2		1	2	1	
6	4		6	3	0		3	3
2	7	9	3		8	6	7	9
5	7	6		6	9	6	9	6

FIGURE LOGIC 8

			3	0	6			
		5	4	4		1	7	
	7	1	4		6	2	9	
8	5		2	3	8		9	1
8			4					7
4	8		1	0	2		4	0
	3	2	3		5	2	7	
	3	0		3	5	7		
		4	2	5				

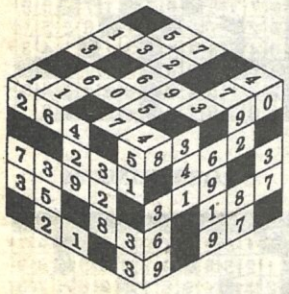
FIGURE LOGIC 9

	4	0	6		7	5	6
4	2		1	9	6		8
8	9	6			3	3	6
8		3	5	7	7		1	
9	2		1		0		5	6
	1		1	3	7	2		0
1	0	1				5	3	9
1		3	7	1		9	8	
2	0	3		4	2	7		

FIGURE LOGIC 10

			9	7	5			
	2	1	3		3	2	5	
	4	5	6	3		1	9	
4	0			9		8	4	1
9		6	5		2	4		5
8	4	5		2			5	6
	4	5		6	7	6	0	
	2	2	1		2	4	7	
			3	3	8			

FIGURE LOGIC 4



NUMBER PLACE

1.

9	5	6	4	8	7	1	2	3
3	1	8	5	2	6	4	7	9
2	4	7	1	3	9	5	6	8
1	6	3	8	5	4	7	9	2
7	2	5	9	6	1	8	3	4
8	9	4	2	7	3	6	5	1
4	3	1	6	9	5	2	8	7
6	7	2	3	4	8	9	1	5
5	8	9	7	1	2	3	4	6

2.

9	3	8	5	1	2	6	4	7
7	6	1	4	9	3	8	2	5
4	2	5	6	8	7	1	3	9
6	8	3	9	4	5	2	7	1
2	5	7	1	3	8	4	9	6
1	9	4	2	7	6	3	5	8
5	1	2	7	6	4	9	8	3
8	7	6	3	2	9	5	1	4
3	4	9	8	5	1	7	6	2

3.

8	2	9	4	5	6	7	1	3
3	7	5	2	1	8	9	6	4
1	4	6	7	9	3	2	8	5
7	3	2	8	6	5	1	4	9
6	8	4	1	7	9	3	5	2
5	9	1	3	2	4	6	7	8
4	6	3	9	8	1	5	2	7
9	5	7	6	4	2	8	3	1
2	1	8	5	3	7	4	9	6

4.

9	2	7	1	3	6	4	8	5
5	4	3	2	8	9	6	7	1
8	1	6	4	7	5	3	9	2
4	5	2	3	6	8	9	1	7
6	9	1	7	4	2	5	3	8
3	7	8	5	9	1	2	4	6
1	8	4	6	2	3	7	5	9
7	6	5	9	1	4	8	2	3
2	3	9	8	5	7	1	6	4

5.

8	2	7	5	6	9	1	3	4
4	1	6	2	8	3	7	9	5
3	5	9	1	7	4	6	2	8
1	7	2	6	3	8	5	4	9
9	4	3	7	5	2	8	6	1
6	8	5	9	4	1	3	7	2
5	9	1	3	2	6	4	8	7
7	3	8	4	9	5	2	1	6
2	6	4	8	1	7	9	5	3

6.

7	5	2	3	4	8	9	6	1
1	3	9	7	2	6	5	8	4
6	4	8	5	9	1	2	7	3
9	1	5	2	3	7	6	4	8
8	2	6	9	1	4	7	3	5
4	7	3	8	6	5	1	2	9
3	9	7	1	8	2	4	5	6
2	6	1	4	5	3	8	9	7
5	8	4	6	7	9	3	1	2

7.

8	2	5	7	9	1	3	4	6
6	1	3	2	8	4	5	9	7
4	7	9	5	3	6	2	8	1
3	6	8	4	2	9	1	7	5
1	4	2	8	5	7	9	6	3
9	5	7	6	1	3	8	2	4
5	8	6	3	4	2	7	1	9
7	3	1	9	6	8	4	5	2
2	9	4	1	7	5	6	3	8

8.

1	3	7	5	2	8	9	6	4
6	8	2	9	4	1	3	7	5
5	9	4	3	6	7	2	8	1
2	1	8	6	9	5	7	4	3
7	5	3	1	8	4	6	2	9
4	6	9	2	7	3	5	1	8
9	7	1	4	5	6	8	3	2
3	2	6	8	1	9	4	5	7
8	4	5	7	3	2	1	9	6

9.

1	8	3	5	2	4	6	9	7
1	9	4	3	8	7	5	6	2
7	2	6	9	5	1	3	4	8
9	8	3	1	6	2	7	5	4
6	5	2	7	9	4	8	1	3
4	1	7	8	3	5	6	2	9
2	6	8	4	7	9	1	3	5
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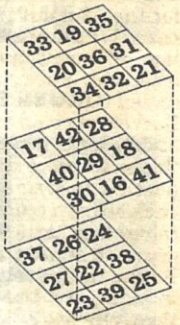
THREE-LAYER MAGIC



THE RIGHT FIT

8	9	5	4	7
9	6	0	2	1
5	0	3	6	4
4	2	6	7	8
7	1	4	8	3

BINGO PLAYS 1

	B	I	N	G	O
P	13	25	37	51	(73)
L	9	20	42	(47)	61
A	2	30	(FREE)	52	65
Y	5	(22)	31	58	63
S	(3)	26	41	57	75

BINGO PLAYS 2

	B	I	N	G	O
P	5	29	32	58	69
L	(2)	(21)	(36)	(55)	(62)
A	8	23	FREE	51	65
Y	6	19	40	48	71
S	10	17	38	52	73

BINGO PLAYS 3

	B	I	N	G	O
P	(2)	25	36	50	72
L	(12)	29	42	54	66
A	(8)	21	FREE	58	62
Y	(14)	16	45	51	70
S	(4)	19	31	48	67

CROSS NUMBERS

1.

6	+	9	+	8	23
−		+		+	
2	+	3	X	5	25
X		X		−	
7	+	4	X	1	11
28		12		12	

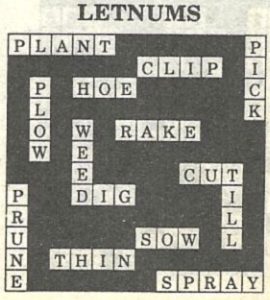
2.

4	−	2	X	9	18
+		+		+	
1	+	6	X	3	21
X		+		X	
8	+	7	+	5	20
32		15		15	

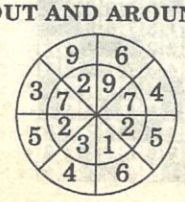
3.

5	+	1	+	8	13
X		+		−	
6	−	4	X	7	14
+		+		X	
3	+	2	X	9	45
10		7		9	

LETNUMS



OUT AND AROUND



FIVE BY FIVE

3	4	7	9	5	2	8	1	3	5	0	6	3	9	5	4	6	1		
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2	5	1	0	4	4	1	5	1	1	9	3	5	4	9	6	2	4		
2	7	6	5	2	9	4	3	5	7	6	0	0	2	3	6	7	5		
5	2	3	6	8	5	6	8	7	2	1	5	4	9	8	1	0	0		
7	7	0	0	5															
6	8	5	2	9															
9	5	7	8	1															
3	8	6	5	1	0	3	0	5	9	3	7	9	6	5	8	4	1		
5	3	0	7	3	6	1	9	8	7	5	7	7	1	8	6	2	5		
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3	3	5	1	4	5	4	7	6	9	4	5	0	8	9	5	5	9		
4	5	9	2	9	7	1	5	7	8	0	8	6	5	0	0	2	F		
													7	3	6	1	I		
													3	5	0	8	N		
													1	7	2	9	I		
													2	4	5	1	S		
													8	3	0	5	H		
5	6	8	3	8	7												T		
9	9	9	5	1	2												▲		
0	5	2	4	6	2	3	5	0	7	6	1	4	5	3	6	6	3		
1	4	9	3	2	5	6	8	9	7	1	0	5	2	3	6	8	4		
7	7	5	9	8	0	0	4	5	6	2	2	7	8	4	1	5	3		
0	1	2	8	5	4	3	6	0	5	7	7	3	2	5	9	0	6		
5	4	0	1	2	8	5	6	0	1	2	5	9	1	7	1	2	5		

NUMBER PLACE CHALLENGER

7	14	1	11	2	13	6	8	9	5	4	3	15	10	16	12
16	4	8	9	7	11	10	3	15	12	2	6	13	1	14	5
12	2	15	5	14	16	1	4	7	13	11	10	3	8	6	9
3	6	13	10	5	9	12	15	14	1	8	16	4	2	11	7
6	15	16	8	13	1	9	2	12	3	7	11	14	5	10	4
13	3	5	7	12	6	4	10	8	14	15	1	2	11	9	16
10	12	14	1	11	5	8	7	2	9	16	4	6	3	13	15
9	11	2	4	3	15	14	16	6	10	13	5	7	12	8	1
5	1	6	14	8	12	15	13	3	16	10	7	9	4	2	11
8	9	10	13	16	7	2	6	4	11	12	15	1	14	5	3
15	16	4	12	9	3	11	14	5	6	1	2	10	13	7	8
11	7	3	2	10	4	5	1	13	8	9	14	12	16	15	6
4	8	9	16	15	14	7	11	10	2	3	12	5	6	1	13
14	13	7	3	6	2	16	12	1	15	5	8	11	9	4	10
2	5	11	15	1	10	3	9	16	4	6	13	8	7	12	14
1	10	12	6	4	8	13	5	11	7	14	9	16	15	3	2

ADD-IT

1.

7	12	10	4	3
1	6	11	2	8
9	2		4	11
9	3	1	10	8
5	12	7	6	5

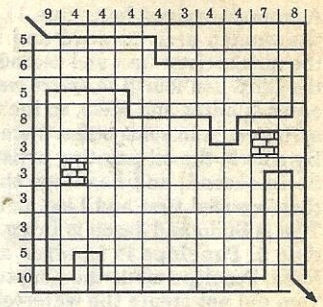
2.

8	6	7	3	9
4	1	12	5	5
8	11		2	12
4	2	6	9	3
10	11	7	1	10

SQUARE LOGIC

12	19	21	8	5
4	11	18	25	7
20	22	9	1	13
6	3	15	17	24
23	10	2	14	16

MATH MAZE



LOGIC PROBLEM 14

Since no student received the same score on two sections (clue 2), the maximum total was 12 points and the minimum total was 6 points. Since no two students received the same point total (clue 1), the seven point totals were 6, 7, 8, 9, 10, 11, and 12. By clue 2, the section scores for the 6-point total were 1, 2, and 3, for the 7-point total 1, 2, and 4, for the 11-point total 2, 4, and 5, and for the 12-point total 3, 4, and 5. No more than five students, then, scored 1 in a section, no more than five students scored 3 in a section, and no more than five students scored 5 in a section. By clue 8, Dusty and Barker received the same score in English and at least three other students received this same score in math. Since each scoring possibility was achieved at least once in each section (clue 11), a sixth student received this same score in science. The same score that was achieved by Dusty and Barker in English, the three other students in math, and the sixth student in science, then, was not 1, 3, or 5; it was either 2 or 4. Dusty scored 4 in the math section (clue 9), so Dusty did not score 4 in English (clue 2); Dusty scored 2 in English. By clue 8, Barker scored 2 in English and three other students scored 2 in math. By clue 11, a sixth student scored 2 in science. The seventh student, then, received the highest total of 12 by scoring, in some order, 3, 4, and 5 in English, math, and science. Since six students received 2, the student with the 10-point total scored 2, 3, and 5, the one with the 9-point total scored 2, 3, and 4, and the one with the 8-point total got 1, 2, and 5. Garcia's total was one point higher than Terry's (clue 3). Both Garcia and Terry scored 3 on the same section, but not in science (clue 4), so Garcia totaled 10 and Terry totaled 9. Since Barker got 2 in English, he or she scored 1, 3, 4, or 5 in math (clue 2), as did the one who scored 2 in science. At least one of these students scored 1 in math (clue 11), so Garcia and Terry did not score 3 each in math; they scored 3 in English. Since Dusty scored 1, 2, and 4 for a total of 7 or 2, 4, and 5 for a total of 11, Barker's total was 6 or 10 (clue 9). Since Garcia totaled 10, Barker totaled 6 and scored, in some order, 1 and 3 in math and science and Dusty totaled 7 and scored 1 in science. By clue 10, Barker is Jamie and Farmer totaled 12. Since Terry totaled 9, Maddox did not total 7 and since Jamie Barker totaled 6, Chris did not total 8 (clue 5), so Maddox totaled 8 and Garcia is Chris. Since Dusty and Jamie scored 2 in English and Maddox was the only other student to score 1 in a section, Maddox scored 1 in English (clue 11). If the one who scored 2 in science scored 1 in math, he or she would be Maddox with an English score of 5. Therefore, the one who scored 2 in science did not score 1 in math; Jamie scored 1 in math and 3 in science. By clue 11, the one who scored 2 in science and Farmer scored, in some order, 3 and 5 in math. Since Chris scored 3 in English, Farmer scored 3 in math and the one who scored 2 in science scored 5 in math. Since Terry scored 3 in English, Terry scored 4 in science and 2 in math. By clue 6, Lister totaled 11 points and scored 5 in math. By clue 7, Nesbit totaled 9 points and is Terry and Kelly totaled 8 points and is Maddox. By elimination, Dusty is Harmon. Lister is not Robin (clue 6); Farmer is. By elimination, Lister is Shawn. Since Shawn scored 5 in math, by clue 8, Chris and Kelly each scored 2 in math. By elimination, Chris and Kelly each scored 5 in science. Shawn scored 2 in science (clue 11). By elimination, Shawn scored 4 in English. Robin scored 5 in English (clue 11). By elimination, Robin scored 4 in science. In summary, with scores for English, math, and science listed in order and the totals listed last:

Chris Garcia, 3, 2, 5, 10
Dusty Harmon, 2, 4, 1, 7
Jamie Barker, 2, 1, 3, 6
Kelly Maddox, 1, 2, 5, 8
Robin Farmer, 5, 3, 4, 12
Shawn Lister, 4, 5, 2, 11
Terry Nesbit, 3, 2, 4, 9

LOGIC PROBLEM 15

By the introduction, each of the 15 squares contains a different color combination. The 15 combinations are blue, green, orange, red; blue, green, orange, violet; blue, green, orange, yellow; blue, green, red, violet; blue, green, red, yellow; blue, green, violet, yellow; blue, orange, red, violet; blue, orange, red, yellow; blue, orange, violet, yellow; blue, red, violet, yellow; green, orange, red, violet; green, orange, red, yellow; green, orange, violet, yellow; green, red, violet, yellow; orange, red, violet, yellow. Each color is contained in ten of the squares. By clue 1, row A contains more blue squares than row B and row B contains more blue squares than row C. All five squares in row A, then, contain blue and rows B and C have either, in order, four and one blue squares or three and two blue squares. By clue 9, all five squares in row B contain red and rows C and A have either, in order, four and one red squares or three and two red squares. Square B-3 contains orange (clue 6) and green and yellow (clue 8). No corner square has violet (clue 3). If neither of the corner squares C-1 and C-5 had blue, there would only be the one color combination used in square B-3 available for both of them. Therefore, squares C-1 and C-5 contain blue and there are three squares that have blue in row B (clue 1). Since violet is not in squares A-1, A-5, B-3, C-1, or C-5, violet is in all of the other squares. Since square C-5 contains blue, by clue 5, neither square C-4 nor C-5 contains red. Square C-5 contains no red or violet, so its colors are blue, green, orange, and yellow. If the remaining corner squares contained no red, they would have the same colors as square C-5. Therefore, squares A-1, A-5, and C-1 contain red. By clue 9, squares C-2 and C-3 contain red. By clue 1, there is no blue in squares C-2, C-3, or C-4. Since square C-4 has no blue or red, its colors are green, orange, violet, and yellow. The three possible color combinations for squares A-1 and C-1 are blue, green, orange, and red, blue, green, red, and yellow, and blue, orange, red, and yellow. At least one of those squares, then, contains green. Green is in squares B-3, C-4, and C-5. By clue 4, column 2 contains no green. Square A-2 contains no green or red, so its colors are blue, orange, violet, and yellow. Square C-2 contains no green or blue, so its colors are orange, red, violet, and yellow. Squares B-2 and B-4 both contain orange (clue 6). Since square B-2 contains no green, its colors are blue, orange, red, and violet and the colors of square B-4 are green, orange, red, and violet. By clue 1, three squares in row B have blue, so squares B-1 and B-5 have blue and the combinations for those two squares are, in some order, blue, green, red, and violet and blue, red, violet, and yellow. The two combinations for squares A-3 and A-4 are, in some order, blue, green, orange, and violet and blue, green, violet, and yellow. Square C-3, then, contains green, red, violet, and yellow. By clue 7, squares A-3 and B-1 have only blue and violet in common. Since A-3 has green, B-1 has yellow and its colors are blue, red, violet, and yellow and A-3 has blue, green, orange, and violet. Square B-5, then, has blue, green, red, and violet and square A-4 has blue, green, violet, and yellow. By clue 2, square A-1 has no yellow, so its colors are blue, green, orange, and red. Also by clue 2, square A-5 has no orange, so its colors are blue, green, red, and yellow. By elimination, square C-1 has blue, orange, red, and yellow. In summary:

A-1: blue, green, orange, red
A-2: blue, orange, violet, yellow
A-3: blue, green, orange, violet
A-4: blue, green, violet, yellow
A-5: blue, green, red, yellow
B-1: blue, red, violet, yellow
B-2: blue, orange, red, violet
B-3: green, orange, red, yellow
B-4: green, orange, red, violet
B-5: blue, green, red, violet
C-1: blue, orange, red, yellow
C-2: orange, red, violet, yellow
C-3: green, red, violet, yellow
C-4: green, orange, violet, yellow
C-5: blue, green, orange, yellow

LOGIC PROBLEM 1

A woman arrived last (clue 1). By clue 4, the women arrived third and fourth and the men arrived first and second. By clue 1, the third and fourth to arrive were, in some order, Lindros and Metz, so the first two to arrive were, in some order, Stein and Brigg. By clue 3, the oil-painting artist was first, Stein second, and Penelope third. Brigg, then, arrived first and Lisa arrived fourth. Tom is Stein and Jason is Brigg (clue 2). By clue 5, Penelope is Lindros and Lisa is Metz. Penelope made the sculpture (clue 1). Tom did not create the watercolor (clue 2), so he made the still life. By elimination, Lisa made the watercolor. In summary:

Jason Brigg, oil painting, first
Lisa Metz, watercolor, fourth
Penelope Lindros, sculpture, third
Tom Stein, still life, second

LOGIC PROBLEM 2

The one who bought the News bought tea (clue 7). The one who bought milk did not get the Free Press (clue 1) or Post (clue 3), so that person got the Times. The one who bought coffee did not buy the Post (clue 2), so the one who bought coffee bought the Free Press. By elimination, the one who bought juice picked up the Post. By clue 4, the one who bought the Times did not go to the supermarket or 24-hour store. By clue 6, the Times buyer did not go to the deli, so that person went to the diner. The one who went to the supermarket did not buy the Free Press (clue 2) or News (clue 7), so the one who went to the supermarket bought the Post. The one who went to the deli did not buy the Free Press (clue 8), so that person bought the News. By elimination, the Free Press was bought at the 24-hour store. By clue 3, John did not go to the diner or supermarket. John did not go to the deli (clue 7), so John went to the 24-hour store. By clue 6, Sylvia did not go to the deli or diner; she went to the supermarket. Also by clue 6, John is Apted. By clue 4, Beard went to the deli. Sylvia is not Hicks (clue 5), so Hicks went to the diner. By elimination, Sylvia is Conti. Hicks is not Felicity (clue 5), so Beard is. By elimination, Hicks is Ed. In summary:

Ed Hicks, diner, Times, milk
Felicity Beard, deli, News, tea
John Apted, 24-hour store, Free Press, coffee
Sylvia Conti, supermarket, Post, juice

LOGIC PROBLEM 3

By clue 4, Melodie and Tex were in #101B, Walter and his wife were in #101A, Jerry and his wife were in #301B, and Rita and her husband were in #501B. By clue 1, Jackie Wertz was in #101A and is married to Walter and Sergey and Stella were in #301A. By clue 5, Kathy Anjou and her husband were in #401B, Dave Engel was in #501B with his wife Rita, Sonja was in #301B with her husband Jerry, and Astrid was in #401A. By clue 3, Max Baum was in #401A with his wife Astrid, the Groz couple was in #501A, Andy and his wife were in #201A, and Candy and her husband were in #201B. Marisa is Ruiz (clue 2). By elimination, she was in #201A with her husband Andy. Reggie is Gero (clue 1). By elimination, he was in #201B with his wife Candy. By clue 6, Melodie and Tex are the Nagios in #101B and Bert was in #401B with his wife Kathy Anjou. By elimination, Peter and Alicia are the Groz couple. Stella and Sergey are not the Bartoks (clue 1), so they are the Arkos. By elimination, Sonja and Jerry are the Bartoks. The person who won money was on the third floor (clue 6). Stella and Sergey Arko and Jerry Bartok broke even (clue 1), so Sonja Bartok won money. In summary:

Jackie and Walter Wertz, #101A
Melodie and Tex Nagio, #101B
Marisa and Andy Ruiz, #201A
Candy and Reggie Gero, #201B
Stella and Sergey Arko, #301A
Sonja (winner) and Jerry Bartok, #301B
Astrid and Max Baum, #401A
Kathy and Bert Anjou, #401B
Alicia and Peter Groz, #501A
Rita and Dave Engel, #501B

LOGIC PROBLEM 4

The person who came in on Friday is not Fiona (clue 1), Jerri (clue 2), Mel (clue 3), or Uma (clue 4), so Tom came in that day. The boa came in Thursday (clue 5). By clue 4, the setter did not come in Monday, Tuesday, or Wednesday. Since the setter did not come in on Friday (clue 5), it came in on Thursday. By clue 4, Uma came in on Monday and the ferret on Tuesday. By clue 2, Muir did not come in on Monday, Tuesday, Wednesday, or Friday, so Muir came in on Thursday. Also by clue 2, Tom brought in the iguana. Muir is not Fiona or Jerri (clue 2), so Muir is Mel. The tarantula came in on Wednesday and Tom is Caan (clue 3). By elimination, Uma owns the macaw. The beagle came in on Tuesday (clue 7). By clue 1, Uma owns the terrier, Fiona came in on Tuesday, and Perez came in on Wednesday. By elimination, Perez is Jerri. Uma is not Cho (clue 6), so Fiona is. By elimination, Uma is Gertz. Jerri does not own the chow (clue 7), so Tom does. By elimination, Jerri owns the boxer. In summary:

Fiona Cho, beagle, ferret, Tuesday
Jerri Perez, boxer, tarantula, Wednesday
Mel Muir, setter, boa, Thursday
Tom Caan, chow, iguana, Friday
Uma Gertz, terrier, macaw, Monday

LOGIC PROBLEM 5

By clue 2, the Gogan was $25,000 more than "Forest," which was $25,000 more than the one with incorrect details. By clue 4, the Manay cost $25,000 more than the Gogan and the one with canvas not being old enough was $25,000 more than the Manay. The five paintings were, from least to most expensive, the one with incorrect details, "Forest," the Gogan, the Manay, and the one with not old enough canvas. By clue 5, the Renwa was not the one with not old enough canvas or incorrect details, so it was "Forest." Also by clue 5, Oscar discovered the forgery with incorrect details. Oscar did not look at the Doli (clue 1), so the Doli was the most expensive. By elimination, Oscar looked at the Cagal. Melina did not look at the Doli (clue 1) or the Renwa (clue 3). By clue 6, "Night" had inconsistent brushwork, so it was not Oscar's painting or the Doli. By clue 3, Melina looked at the Manay and "Night" was the Gogan. Cedric did not look at the Doli (clue 1) or Gogan (clue 2), so he looked at the Renwa. "Horses" was not looked at by Melina (clue 3) or Oscar (clue 8), so "Horses" was the Doli. By clue 7, Melina looked at "Pond" and Ruby examined the Gogan. By elimination, the Doli was looked at by Adrian and Oscar examined "Farm." "Pond" did not have the odd signature (clue 7), so "Forest" did. By elimination, "Pond" was the genuine painting. "Night" went for $150,000 (clue 6). By clue 2, the Cagal was $100,000 and the Renwa $125,000. By clue 4, the Manay was $175,000 and the Doli $200,000. In summary:

Adrian, Doli, "Horses," $200,000, canvas not old enough
Cedric, Renwa, "Forest," $125,000, signature unlike the artist's
Melina, Manay, "Pond," $175,000, genuine
Oscar, Cagal, "Farm," $100,000, incorrect details
Ruby, Gogan, "Night," $150,000, inconsistent brushwork

LOGIC PROBLEM 6

Ms. Edelman's classroom and the U.S. literature classroom are, in some order, #1 and #6 (clue 1). By clue 7, Ms. Edelman's classroom is #6, so the U.S. literature classroom is #1. The instructor in the #1 classroom is not Mr. Norris (clue 3), Mr. Cruz or Ms. Nesby (clue 6), or Mr. Hailey (clue 7), so Mr. Young teaches U.S. literature in classroom #1. The instructor in classroom #2 is not Mr. Norris (clue 3) or Mr. Cruz or Ms. Nesby (clue 6), so Mr. Hailey teaches in #2. Mr. Young also teaches electronics (clue 7). Since Mr. Norris teaches in classroom #4 or #5 (clue 3) and, by the same clue, he is not next to Ms. Nesby, Mr. Norris teaches in classroom #5 and Ms. Nesby teaches in classroom #3. By elimination, Mr. Cruz teaches in classroom #4. Mr. Hailey teaches English (clue 6). Since carpentry is taught between auto mechanics and world history and is not adjacent to either (clue 2), Mr. Cruz teaches carpentry in #4, Ms. Edelman teaches world history in #6, and Mr. Hailey teaches auto mechanics in #2. By clue 5, Mr. Norris teaches air-conditioning repair and Mr. Cruz teaches world literature. Mr. Norris teaches philosophy and Ms. Edelman teaches computer programming (clue 4). By elimination, Ms. Nesby teaches heavy-machinery operation and U.S. history. In summary:

Cruz, carpentry, world literature, #4
Edelman, computer programming, world history, #6
Hailey, auto mechanics, English, #2
Nesby, heavy-machinery operation, U.S. history, #3
Norris, air-conditioning repair, philosophy, #5
Young, electronics, U.S. literature, #1

CRYPTIC MATH

By clue 3, I is either 2 or 3. By clue 4, N is either 6 or 8, J is 2, 3, or 4, and L is 2, 3, or 4. If N were 6, J and L would be, in some order, 2 and 3 (clue 4). This, however, would leave no digit for I. Therefore, N is not 6; it is 8. By clue 4, J and L are, in some order, 2 and 4 and by clue 3, I is 3 and M and H are, in order, 6 and 9. By clue 2, F is 1. By clue 1, J and K are, in order, 4 and 5. L, then, is 2. By elimination, G is 7. In summary:
F = 1, G = 7, H = 9, I = 3, J = 4, K = 5, L = 2, M = 6, N = 8.

LOGIC PROBLEM 7

By clue 5, the one who went to Peacock Springs left either on Monday or Friday and is not Theo. Dave did not leave on Monday or Friday (clue 8), so he did not go to Peacock Springs. By clue 9, one woman went to Garnet Park and the other left on Tuesday, so neither Emily nor Maggie went to Peacock Springs; Roy went to Peacock Springs. Theo left on Monday or Friday (clue 5). The woman who went to Garnet Park did not go on Monday or Friday (clue 5) or Tuesday (clue 9), so she left on Wednesday or Thursday. Dave did not leave on Tuesday (clue 9), so he departed on Wednesday or Thursday. Dave left before and after, in some order, Hetz and the one who went to Pelham Lake, so Hetz went to Garnet Park on either Wednesday or Thursday. The one who traveled 375 miles did not go to Pelham Lake (clue 1), Bisco Beach (clue 2), Garnet Park (clue 9), or Peacock Springs (clue 10), so that person went to Hanley Preserve. The one who went to Hanley Preserve is not Boyle (clue 6) or Pei or Starr (clue 7), so Stein went to Hanley Preserve. The one who left on Friday is not Stein (clue 1), Pei (clue 2), or Starr (clue 7), so Boyle left on Friday. Maggie did not travel 375 miles (clue 3) or 65 miles (clue 6). Since Boyle did not travel 65 miles (clue 10), Maggie did not travel 185 or 235 miles, so she traveled 285 miles. Boyle went 185 miles (clue 6). Roy traveled 65 miles (clue 10). Boyle is Theo and Roy departed on Monday (clue 5). The one who went to Pelham Lake did not leave on Tuesday (clue 1), so by clue 8, Dave did not leave on Wednesday; he left on Thursday. Also by clue 8, Hetz left on Wednesday and Boyle went to Pelham Lake. Dave is not Pei (clue 2) or Starr (clue 7), so he is Stein. By elimination, the one who went to Bisco Beach left on Tuesday. Roy is Pei (clue 2). By elimination, Starr went to Bisco Beach. Hetz is Emily (clue 7). By elimination, Starr is Maggie and Emily traveled 235 miles. In summary:

Dave Stein, Hanley Preserve, 375, Thursday
Emily Hetz, Garnet Park, 235, Wednesday
Maggie Starr, Bisco Beach, 285, Tuesday
Roy Pei, Peacock Springs, 65, Monday
Theo Boyle, Pelham Lake, 185, Friday

LOGIC PROBLEM 8

Each car was given "two" by a different critic and no two critics gave "two" to two different cars (clue 3). By clue 1, the one who gave the Astari "two" gave "zero" to each of the other cars and so had a total of two. By clue 6, the other totals were 3, 4, 5, 6, and 7. The critic who gave the Meteor "two" had a total of seven (clue 9). The total of the critic who gave the Lenix "two" was less than the one who gave the Panther "two," which was less than the one who gave the Olantra "two" (clue 7). Also by clue 7, two of those three totals were odd numbers, so the total of the one who gave the Lenix "two" was three and the one who gave the Panther "two" had a total of four or five and the one who gave the Olantra "two" had a total of five or six, respectively. By clue 8, the order of the totals alternated between men and women. Maria's total was not two (clue 2). By clue 4, Maria's total was either four or six. If Maria's total were six, Alicia's would have been seven (clue 2). This, however, contradicts clue 8. Therefore, Maria's total was not six; her total was four. Alicia's total was greater than Maria's (clue 2). By clue 8, Alicia's total was six and Karen's was two. Maria did not choose the Panther as her outstanding car (clue 4), so by clue 7, the Panther was given "two" by the critic whose total was five and Alicia gave "two" to the Olantra. By elimination, Maria selected the Shasta as her outstanding vehicle. By clue 5, Chuck's outstanding car was the Lenix, Pancho chose the Panther as his, and Jack selected the Meteor. In summary:

Alicia, Olantra, 6
Chuck, Lenix, 3
Jack, Meteor, 7
Karen, Astari, 2
Maria, Shasta, 4
Pancho, Panther, 5

LOGIC PROBLEM 9

The sci-fi book cost either $30 or $33 (clue 1). If it had cost $30, by clue 1, Gilliant's book would have cost $24 and "Fancy" would have cost $27. Gilliant would not have bought the biography (clue 4) or how-to book (clue 5), so Gilliant would have bought the mystery. The how-to book would not have been $33 (clue 5), so it would have been "Fancy." By elimination, the biography would have been $33. Virgil would not have bought the biography (clue 4). By clue 6, Gilliant would have bought "Sable." This, however, contradicts clue 8. Therefore, the sci-fi book did not cost $30; it cost $33. The sci-fi book was not "Fancy" (clue 1) or "Sable" (clue 6), so it was either "Wisdom" or "Jinx." If it were "Wisdom," it would not have been bought by Virgil (clue 2), Rita (clue 3), Terry (clue 5), or Wendy (clue 7). Therefore, "Wisdom" was not the sci-fi book; it was "Jinx." Burns did not buy "Jinx" (clue 3). By clue 5, Terry bought the $24 book, the how-to book cost $27, and Burns purchased the $30 book. Rita did not pick up the $30 book or the $33 one (clue 3), so she bought the how-to book. Virgil bought either the $30 book or the $33 one. If he had bought the $33 book, by elimination, Burns would be Wendy. Styron would not be Virgil (clue 2) or Rita (clue 5), so Terry would be Styron. By clue 1, Rita would be Gilliant and Burns would have purchased "Fancy." Styron would not have bought "Wisdom" (clue 2) or "Sable" (clue 8), leaving no book for Styron. Therefore, Virgil did not buy the $33 book; he is Burns and bought the $30 book. By elimination, Wendy bought "Jinx." Virgil did not get the biography (clue 4), so he picked up the mystery. By elimination, Terry bought the biography. Gilliant is not Wendy (clue 1) or Terry (clue 4), so Gilliant is Rita. Virgil purchased "Fancy" (clue 1). "Sable" was not purchased by Landon (clue 6) or Styron (clue 8), so Gilliant bought that book. By elimination, Terry bought "Wisdom." Terry is not Styron (clue 2), so Terry is Landon. By elimination, Wendy is Styron. In summary:

Rita Gilliant, "Sable," how-to, $27
Terry Landon, "Wisdom," biography, $24
Virgil Burns, "Fancy," mystery, $30
Wendy Styron, "Jinx," sci-fi, $33

LOGIC PROBLEM 10

Washing the windows inside and outside were done on different days (clue 7). By clue 1, the washing of the windows inside and outside were done before both when the screens were repaired and the morning the curtains were washed. By clue 3, the porch was painted on a morning, but not on Friday. The porch was painted after the curtains were washed (clue 7), so the curtains were washed on Wednesday morning and the porch was painted on Thursday morning. The windows were not washed outside on Monday (clue 4), so they were washed outside on Tuesday and the windows were washed inside on Monday. By clue 9, the screens were repaired on Tuesday. The screens were repaired before the hedges (clue 1), which were done before the deck (clue 9), but not on the same day (clue 7). The deck wasn't cleaned on Friday (clue 5) or Thursday (clue 7), so it was done on Wednesday. By clue 1, the hedges were done in the late afternoon on Tuesday, the screens were done in the early afternoon on Tuesday, and the outside windows were washed on Tuesday morning. The path was weeded on Monday morning (clue 9). By clue 4, the kitchen was cleaned Friday morning, the groceries were bought Friday early afternoon, and the grandson helped on Friday in the late afternoon. No yardwork was done on Thursday (clue 7), so the barbecue and the cleaning of the outdoor furniture were done on Thursday. By clue 5, herbs were planted after the hedges, but not on Wednesday, so the planting of herbs was the last chore on Friday. The granddaughter worked on Monday at the same time of day as the uncle (clue 4). The impatiens were planted after the uncle worked (clue 6), so the impatiens were done on Wednesday. By elimination, the lawn was mowed on Monday. By clue 2, the lawn was mowed after the aunt worked, who didn't work in the morning, so on Monday the lawn was mowed in the late afternoon and the aunt washed the inside windows in the early afternoon. The nephew helped on Monday, but not in the morning (clue 3), so he mowed the lawn and the granddaughter helped Monday morning. By clue 2, the cousin worked in the morning, but not on Friday. The cousin didn't work on Tuesday (clue 6) or Thursday (clue 8); the cousin helped on Wednesday morning and the uncle on Tuesday morning. The niece worked on Tuesday (clue 6), but not in the late afternoon (clue 5), so she worked in the early afternoon. Also by clue 5, the daughter helped on Thursday late afternoon, so the deck was cleaned in the early afternoon on Wednesday and the impatiens were planted in the late afternoon on Wednesday. The sister helped on Friday and she didn't clean the kitchen (clue 3), so she helped with the groceries. The son didn't work in the morning (clue 3) and he helped later in the week than the daughter-in-law (clue 8). The daughter-in-law didn't work in the late afternoon (clue 2), so she helped on Wednesday. The son, then, helped in the early afternoon on Thursday. The daughter-in-law worked on Wednesday in the early afternoon (clue 8). The son didn't clean the barbecue (clue 8), so he cleaned the outdoor furniture and the barbecue was cleaned in the late afternoon on Thursday. By clue 2, the daughter-in-law helped earlier in the day than the brother-in-law and on different days, so the brother-in-law worked in the late afternoon on Tuesday. The brother helped earlier in the day than the son and earlier in the week than the son-in-law (clue 3), so the brother helped on Thursday morning and the son-in-law worked on Friday morning. By elimination, the sister-in-law worked late afternoon on Wednesday. In summary, listed in order by morning chore, early afternoon chore, and late afternoon chore:

Monday: path (granddaughter), inside windows (aunt), lawn (nephew)
Tuesday: outside windows (uncle), screens (niece), hedges (brother-in-law)
Wednesday: curtains (cousin), deck (daughter-in-law), impatiens (sister-in-law)
Thursday: porch (brother), outdoor furniture (son), barbecue (daughter)
Friday: kitchen (son-in-law), groceries (sister), herbs (grandson)

LOGIC PROBLEM 11

The first customer to arrive wasn't Viola (clue 2), Seth (clue 4), Fawn (clue 6), or Pearl (clue 9), so either Keith or Willie arrived first. By clue 5, neither Keith nor Willie exchanged the pool cues. The first to arrive didn't exchange the archery set (clue 1), tennis racket (clue 4), or golf clubs (clue 6), so he wanted to exchange either the bowling ball or basketball. By clue 3, neither the one who traded the bowling ball nor the one who exchanged the basketball received the casseroles. The first to arrive didn't receive the coffee mugs (clue 1), steak knives (clue 2), or coffeepot (clue 6), so he received either the tea set or toaster. The first customer did not trade with Marie MacKenzie (clue 8). The first customer did not trade with Beth (clue 4), Dina (clue 6), or Nick (clue 9), so he traded with either Zack or Rick. Willie did not trade with Zack (clue 1) or Rick (clue 5), so Willie wasn't the first customer; Keith was. Keith didn't receive the toaster (clue 5), so he received the tea set. Keith did not exchange the basketball (clue 8), so he exchanged the bowling ball. By clue 9, Pearl arrived second, Islin arrived third, the one who traded for the toaster arrived fourth, and the one who traded with Nick arrived sixth. Islin did not trade with Beth (clue 7). By clue 4, Underwood is not Keith or Pearl, so Underwood arrived fourth, the fifth customer traded with Beth, Seth was the sixth customer, and Islin traded the tennis racket. By clue 8, Marie's customer was not Islin or Underwood, so her customer was Pearl. Maglie did not arrive first or second (clue 1), so he or she arrived fifth or sixth. Also by clue 1, Willie, the one who traded the archery set, and the one who received the coffee mugs did not arrive fourth, fifth, and sixth, respectively, so they arrived third, fourth, and fifth, respectively, Seth is Maglie, and Keith was Zack's customer. Weathers did not arrive first (clue 6) or second (clue 10), so Weathers arrived fifth. Weathers is not Fawn (clue 6), so Weathers is Viola. By elimination, Underwood is Fawn. Fawn did not trade with Dina (clue 6), so Willie did. By elimination, Fawn traded with Rick. Since there were no customers between Fawn and Viola, by clue 2, there were no customers between Fein and the one who received the steak knives, so Seth did not receive the steak knives. Seth did not receive the coffeepot (clue 6), so he received the casseroles. Also by clue 6, Pearl received the coffeepot and Seth traded the golf clubs. By elimination, Willie received the steak knives. Pearl did not trade the basketball (clue 3), so Viola did. By elimination, Pearl traded the pool cues. By clue 2, Pearl is Fein. By elimination, Keith is Chasen. In summary:

- Fawn Underwood, archery, Rick, toaster, fourth
- Keith Chasen, bowling ball, Zack, tea set, first
- Pearl Fein, pool cues, Marie, coffeepot, second
- Seth Maglie, golf clubs, Nick, casseroles, sixth
- Viola Weathers, basketball, Beth, coffee mugs, fifth
- Willie Islin, tennis racket, Dina, steak knives, third

LOGIC PROBLEM 12

The husbands include Dave (clue 2) and Eli, Ted, and Zachary (clue 6). The wives include Yvonne (clue 2), Tabitha (clue 5), and Nancy and Zelda (clue 6). The daughters include Naomi (clue 2), Yvette (clue 5), and Deborah and Elizabeth (clue 6). The sons include Tim (clue 2) and Eliot, Neil, and Yves (clue 6). By clue 1, no two wives have the same initial letter as do no two daughters, so Teresa is a daughter and Deirdre is a wife. Also by clue 1, no two husbands have the same initial letter as do no two sons, so Yul is a husband and Dylan is a son. Yvonne is not married to Yul (clue 1) or Dave (clue 2). Deidre is not married to Dave (clue 1) or Yul (clue 4). Dylan's mother is not Deirdre (clue 1) or Yvonne (clue 4) and his father is not Dave (clue 1) or Yul (clue 4). The five families are Yvonne's, Deirdre's, Dylan's, Dave's, and Yul's. The family that never moved is not Dave's (clue 2) or Deirdre's or Dylan's (clue 4). Either Yvonne's or Yul's family never moved. If Yul's family never moved, by clue 4, Deirdre's family would have traveled zero miles. Therefore, Yul's family was not the one that never moved; Yvonne's family never moved. Dave traveled 500 miles (clue 2). By clue 4, he did not travel the farthest, so Dylan traveled the farthest. By clue 2, Dylan is Erskine. The families that moved traveled a whole number of miles (clue 7). Since Dave traveled 500 miles, by clue 3, Dave is not Yancy. By clue 1, neither Yvonne nor Yul is Yancy, so Deirdre is Yancy. By clue 3, Teresa is not Yancy or Erskine and Deirdre traveled three times farther than Teresa. Deirdre traveled twice as far as Yul (clue 4), so Teresa is not Yul's daughter. Teresa is either Yvonne's or Dave's daughter. If she were Yvonne's daughter, by clue 3, the Yancys would have also traveled zero miles. Therefore, Teresa is not Yvonne's daughter; she is Dave's daughter. By clue 3, the Yancys traveled 1,500 miles. By clue 4, Yul traveled 750 miles and Dylan traveled 2,300 miles. By clue 1, Yves is not Yvonne's or Yul's son, nor is he Yancy, so he is Dave's son. Also by clue 1, Yvette is not Yvonne's or Yul's daughter, nor is she Yancy, so she is Erskine. Tabitha is not Teresa's mother (clue 1) or Erskine (clue 5), so she is married to Yul. Tim is not the son of Tabitha (clue 1) or Yvonne (clue 2), so he is Yancy. Also by clue 2, Naomi is Tabitha's daughter. Deborah is not Deirdre's daughter (clue 1), so she is Yvonne's daughter. By elimination, Elizabeth is Yancy. Neil is not Naomi's brother (clue 1), so he is Deborah's brother. By elimination, Eliot is Naomi's brother. Donner is not Deborah or Dave (clue 1), so Tabitha is Donner. Nolan is not Neil (clue 1), so Dave is Nolan. By elimination, Yvonne is Zane. Nancy is not Nolan (clue 1), so she is Erskine. By elimination, Zelda is Nolan. By clue 1, Eli is not Elizabeth Yancy's father or Erskine, so he is Zane. Ted is not Tim Yancy's father (clue 1), so he is Erskine. By elimination, Zachary is Yancy. In summary, with wife, husband, daughter, and son listed in order:

- Donners: Tabitha, Yul, Naomi, Eliot; 750 miles
- Erskines: Nancy, Ted, Yvette, Dylan; 2,300 miles
- Nolans: Zelda, Dave, Teresa, Yves; 500 miles
- Yancys: Deirdre, Zachary, Elizabeth, Tim; 1,500 miles
- Zanes: Yvonne, Eli, Deborah, Neil; 0 miles

LOGIC PROBLEM 13

The first to arrive was not Gladys (clue 3), Angela (clue 6), or Alice (clue 9), so one of the men arrived first. By clue 2, a woman arrived second. Angela did not arrive second (clue 6), so Alice or Gladys arrived second. If Gladys arrived second, by clue 8, the man in the red hat would have arrived first. By clue 3, the red hat would have been the cowboy hat and the third person would have worn the gray hat. The third person would not have worn the watch cap (clue 4), beret (clue 5), or fedora (clue 10). Since Gladys would not have worn the black hat (clue 8), the third person would not have worn the baseball cap (clue 6), so the third person would have worn the Panama hat. By clue 1, the third person would not have been Herb or Alice. The third person would not have been Edgar (clue 5) or Angela (clue 12), so the third person would have been George. This, however, contradicts clue 4. Therefore, Gladys did not arrive second; Alice did. Herb did not arrive first (clue 1), so George or Edgar arrived first. If George arrived first, he would not have worn the cowboy hat (clue 3), watch cap or Panama hat (clue 4), baseball cap (clue 6), or fedora (clue 7), so he would have worn the beret. George's beret would not have been white (clue 11). By clue 1, Alice would not have worn the white hat, so George would not have had the tan sweat shirt. George, then, would not be referred to in clue 1. Therefore, George did not arrive first; Edgar did. Edgar did not wear the cowboy hat (clue 3), watch cap (clue 4), beret (clue 5), baseball cap (clue 6), or fedora (clue 7), so he wore the Panama hat. The last person to arrive was not Gladys (clue 3) or George (clue 4). Either Angela or Herb arrived last. If Angela arrived last, by clue 2, a male would have arrived third, Gladys fourth, and another male fifth. Herb would not have arrived third (clue 1), so he would have been fifth and, by elimination, George third. Gladys would have worn the watch cap (clue 4). George would not have worn the cowboy hat (clue 12). By clue 3, Herb would have had the cowboy hat and George would have had the gray hat. By clue 7, the fedora would not have been Angela's or Alice's, so George would have worn the fedora. Angela would not have worn the baseball cap (clue 6), so Alice would have. Edgar would have worn the black hat (clue 6). This, however, contradicts clue 8. Therefore, Angela did not arrive last; Herb did. Herb's hat was not white (clue 1), yellow (clue 4), black (clue 6), red (clue 8), or gray (clue 10), so his hat was brown. His sweat shirt was not tan (clue 1), blue (clue 3), green (clue 5), pink (clue 6), or magenta (clue 7), so it was orange. Herb did not bring the cold cuts (clue 1), cole slaw (clue 4), cheese (clue 5), macaroni salad (clue 6), or soda (clue 7), so he brought the potato chips. Herb did not wear the cowboy hat (clue 3), watch cap (clue 4), beret (clue 5), or fedora (clue 7), so he wore the baseball cap. The fifth one to arrive was not George (clue 2) or Gladys (clue 3), so Angela was fifth. Either George or Gladys was fourth. If Gladys were fourth, by elimination, George would have been third. George would not have the cowboy hat (clue 12). By clue 3, George would have had the gray hat and Angela would have had the cowboy hat. Gladys would have had the watch cap (clue 4). Alice would have had the beret (clue 5) and, by elimination, George would have had the fedora. This, however, contradicts clue 10. Therefore, Gladys did not arrive fourth; George did. By elimination, Gladys arrived third. Angela wore the watch cap (clue 4). Gladys did not wear the cowboy hat (clue 3) or beret (clue 5), so she wore the fedora. George did not wear the cowboy hat (clue 12), so he wore the beret. By elimination, Alice wore the cowboy hat. The beret was gray (clue 3). The Panama hat was red (clue 8). By clue 4, Gladys wore the yellow hat and Alice brought the cole slaw. The watch cap was not black (clue 6), so it was white. By elimination, the cowboy hat was black. By clue 1, George wore the tan sweat shirt and Gladys brought the cold cuts. By clue 5, Alice wore the green sweat shirt and Angela brought cheese. By clue 6, Edgar brought the macaroni salad and Gladys wore the pink sweat shirt. By elimination, George brought soda. Edgar wore the magenta sweat shirt (clue 7). By elimination, Angela wore the blue sweat shirt. In summary:

- First: Edgar, red Panama hat, magenta sweat shirt, macaroni salad
- Second: Alice, black cowboy hat, green sweat shirt, cole slaw
- Third: Gladys, yellow fedora, pink sweat shirt, cold cuts
- Fourth: George, gray beret, tan sweat shirt, soda
- Fifth: Angela, white watch cap, blue sweat shirt, cheese
- Sixth: Herb, brown baseball cap, orange sweat shirt, potato chips

CROSS SUMS HELPS

#1: 2431	#2: 1724	#3: 689
#4: 6241	#5: 5984	#6: 786
#7: 394	#8: 91847	#9: 29531
#10: 975	#11: 64152	#12: 638
#13: 9485	#14: 48913	#15: 572136
#16: 3512	#17: 157	#18: 9683
#19: 89153	#20: 796438	

WORD ARITHMETIC

	0 1 2 3 4 5 6 7 8 9
1.	F O L K/ D A N C E S
2.	S W O R D/ F I G H T
3.	C O N F I G U R E D
4.	F O U R T H/ G A M E
5.	W I N/ T H E/ G O L D
6.	A R E/ Y O U/ K I N D?
7.	Z E B R A/ F I N C H
8.	H O T/ C A N D L E S
9.	S I M P L Y/ D O N E
10.	F A I R- S P O K E N
	(spoken courteously)
11.	F I V E/ G U A R D S
12.	D R A I N S/ C L O G
13.	S M O K I N G/ C A R
14.	L O N G/ F I B E R S
15.	L E A F Y/ S H R U B
16.	C H L O R I N A T E
17.	N E X T/ F R I D A Y
18.	D O G/ P I C T U R E
19.	T H I N/ L A Y E R S
20.	M A G I C/ W O R D S
21.	B R O N Z E/ D I S H
22.	Q U A I N T/ P O E M
23.	S E C O N D/ T R I P
24.	L I G H T/ R O B E S
25.	G R A N D/ E X I T S
26.	B R O W N/ F U D G E
27.	U N S T E A D I L Y
28.	U S I N G/ P O W E R
29.	B A G/O F/ P L U M S
30.	I N T E R L O C K S
31.	P O L I S H/ B A N K
32.	D E V O U T/ G I R L
33.	T H I C K/ A L B U M
34.	W A C K Y/ P R O S E
35.	H E R/ A C T I O N S
36.	N O T/ A S/ L U C K Y
37.	E X T R A/ C O I N S
38.	S T R A N G E/ J O B
39.	O I L Y/ S T R E A K
40.	Q U I T E/ M A N L Y
41.	W I N G- S H A P E D
42.	G L I T Z Y/ C A R S
43.	W I L D/ H O A X E S
44.	O U R/ P E N C I L S
45.	S W I F T/ P U N C H

NUMBERAMA

A.	35	(+17 –8 +17 –8 +17 –8 +17 –8)
B.	13	(–5 +2 +4 +6 –5 +2 +4 +6)
C.	5	(x8 ÷2 –2 ÷2 x8 ÷2 –2 ÷2)
D.	3	(+7 +9 ÷3 ÷3 +11 +13 ÷3 ÷3)
E.	24	(x4 –4 –4 x3 –3 –3 x2 –2 –2)
F.	42	(÷7 x2 x3 +18 ÷7 x2 x3 +18)
G.	20	(–16 ÷4 x6 –4 –16 ÷4 x6 –4)
H.	15	(x3 +12 –10 x3 +12 –15 x3 +12 –20)
I.	7	(÷8 +3 x3 –5 ÷7 +2 x2 –4)
J.	4	(–6 –5 x8 –4 –3 x8 –2 –1 x8)
K.	6	(+10 –8 x6 ÷4 +10 –8 x6 ÷4)

FIGURE LOGIC HELPS

1. By clue 2-Down, the first digit of 2-Down is 7, 8, or 9. The second digit of 1-Down is 1, 2, or 3 (clue 1-Across). The second digit of 7-Across is 1, 2, or 3 (clue 7-Across). By clue 20-Down, the second digit of 20-Down is 7, 8, or 9. By clue 23-Across, 23-Across is 579.

2. By clue 13-Across, the first digit of 12-Across is 1 or 2 and the last digit of 13-Across is even. By clue 12-Down, 12-Down is 2222.

3. The first digit of 19-Across is 3 (clue 19-Across). The first digit of 26-Down is 1 or 2 (clue 19-Down) and the first digit of 6-Across is 1 or 2 (clue 26-Across). By clue 1-Down, the second digit of 29-Across is 9 or 0. The last digit of 34-Across is 0 or 1 (clue 20-Down). By clue 1-Across, the last digit of 1-Across is 9 and the last digit of 34-Across is 1.

4. By clue 4-B, the first digit of 4-B is 1. By clue 31-C, the first digit of 31-C is 3, 4, or 5. By clue 27-A, the first digit of 9-B is 1, 2, or 3 and the second digit of 9-B is 1, 8, or 5. By clue 9-B, 9-B is 11.

5. Since 9-Down is evenly divisible by four (clue 3-Down) and has consecutive digits in ascending order (clue 9-Down), 9-Down is 23456.

6. By clue 1-Across, 1-Across is 1234, 2345, 3456, 4567, 5678, or 6789. By clue 7-Across, 1-Across is not 4567, 5678, or 6789. Since no two answers are the same, by clue 26-Across, 1-Across is not 1234 or 2345. 1-Across, then, is 3456.

7. Since * is a number with alternate digits being the same with its sum of the first, third, and fifth digits equaling the sum of the second and fourth digits, 32-Across is 23232, 46464, or 69696 (clue 32-Across). By clue 9-Down, 32-Across is 69696.

8. By clue 1-Down, 1-Down is two consecutive digits in ascending order. By clue 5-Across, 1-Down is 34, 56, or 78 and 5-Across is 17, 28, or 39, respectively. By clue 24-Down, 24-Down is 35.

9. By clue 19-Down, 15-Across is at least 51. The first digit of 5-Across is 1, 2, 3, or 4 (clue 13-Across). By clue 5-Down, 5-Down is 16, 25, 36, or 49 and § is 4, 5, 6, or 7, respectively. The first digit of 24-Down is 1 or 2 (clue 24-Down). The first digit of 27-Across is 1, 2, 3, or 4 (clue 5-Across). By clue 15-Across, 5-Down is not 16. By clue 22-Down, the first digit of 25-Across is 7, 8, or 9. If 5-Down were 25, by clue 5-Down, § would be 5. By clue 24-Down, 24-Down would be 12 or 22 and 25-Across would be 60 or 110. Therefore, 5-Down is not 25; it is either 36 or 49 and § is 6 or 7. The first digit of 27-Across is 3 or 4 (clue 5-Across). By clue 24-Down, 24-Down is 13 or 14. Since the first digit of 6-Across is 1 (clue 6-Across), 2-Down is 51 or 61 (clue 2-Down). By clue 27-Across, 27-Across is 306 or 427. By clue 5-Across, 5-Across is 30 or 42. By clue 15-Across, 5-Across is not 30, so 5-Across is 42.

10. Since no two answers are the same, 1 is not I (clue 5-Across), P (clue 13-Down), R (clue 17-Down), or M (clue 25-Down). Also, 1 is not A (clue 21-Across), U (clue 9-Down), H (clue 14-Down), or L (clue 19-Down), so 1 is T.

FUN WITH FACTS AND FIGURES

1. 9; 2. x 4 (May, June, July, August) = 36; 3. x 2 (Mars and Venus) = 72; 4. – 8 = 64; 5. x 6 (Berlin) = 384; 6. ÷ 16 (1 + 4 + 9 + 2) = 24; 7. + 9 = 33; 8. – 5 (North Carolina, South Carolina, North Dakota, South Dakota, West Virginia) = 28; 9. x 1 (Dwight Eisenhower) = 28.

MATHEMATICAL DEDUCTION

1. 1 (subtract the two smaller numbers from the largest); 2. 22 (divide the left-hand number by the right-hand number, then add the bottom number); 3. 86 (multiply the smallest and largest numbers, then subtract the remaining number); 4. 42 (divide the bottom number by the smaller of the remaining two, then multiply by the remaining number); 5. 39 (add the two largest numbers, then multiply by the remaining number).

DEDUCTION PROBLEM

From the introduction, each boy made one false statement. If Bob had run the red light, his first, third, and fourth statements would be false. Therefore, Bob did not run the red light, so his first and fourth statements are true. Al's third statement is false, so his first, second, and fourth statements are true. Since Al's second statement is true, he did not run the red light. Since Al's fourth statement is true, Chuck's third statement is false and his first, second, and fourth statements are true and he didn't run the red light. Since Chuck's first statement is true, Bob's third statement is true, so his second statement is false. Dave's first and second statements are true. Since Al's first statement is true, Dave's third statement is true and his fourth statement is false. Since Dave's fourth statement is false, Fred's third statement is true. Since Bob's second statement is false, Fred's fourth statement is true. Since Chuck's second statement is true, Fred's first statement is true. Fred's second statement, then, is false and he is the one who ran the red light. In summary, with the false statements indicated:

Al, third
Bob, second
Chuck, third
Dave, fourth
Fred, second (ran the red light)

MYSTERIOUS FOOTPRINTS

The footprints are, in order, 7, 12, 8, 11, 5, 9, 3, 4 = 59.

CALCULATE A WORD

1. quirk; 2. magic; 3. cabin; 4. oasis; 5. furry; 6. yield; 7. bacon; 8. rural; 9. known; 10. enter. *(Other answers may be possible.)*

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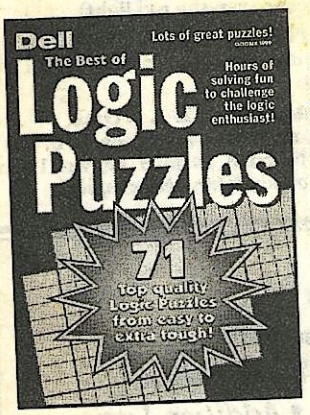
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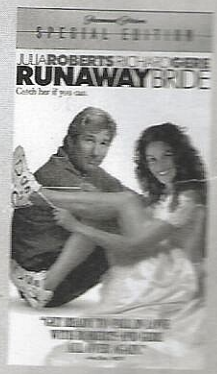

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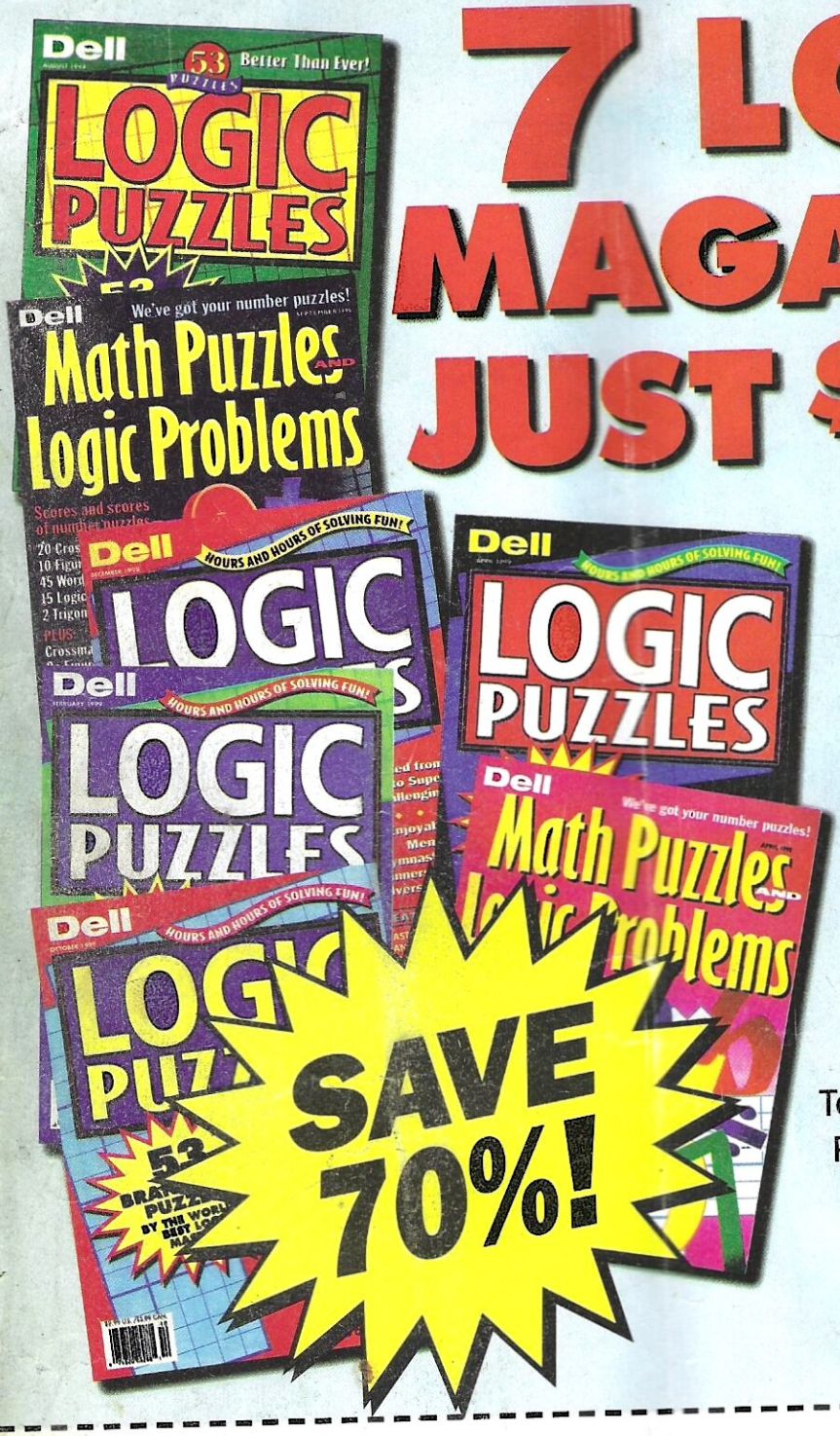

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